U N I T E D S T A T E S N A V A L O B S E R V A T O R Y

C I R C U L A R N O. 9 8

U. S. Naval Observatory, Washington, D. C. 20390 June 12, 1964

PHYSICAL EPHEMERIS OF MARS 1877 – 1967

by

Victoria Meiller

This *Circular* contains an ephemeris for physical observations of Mars for periods of sixty days centered about each opposition from 1877 to 1967. It has been produced in order to provide a systematic ephemeris over this period with which observations may be compared.

The adopted rotation elements are:

North pole (Average of determinations by Camichel, *Bull. Astron. Paris* 18, 83, 1954 and Burton, *A. J.*, 39, 163, 1929. See de Vaucouleurs, Memorandum RM–3999–NASA, RAND Corporation, Jan. 1964).

At the beginning of the year t

$$\alpha_o = 316^\circ.55 + 0^\circ.006533 \ (t - 1905.0)$$

$$\delta_o = +52^\circ.85 + 0^\circ.003542 \ (t - 1905.0)$$

Sidereal period of rotation (Ashbrook, *A. J.*, 58, 145, 1953).

In ephemeris time, $24^h\ 37^m\ 22^s.6689$

Central meridian, referred to the zero meridian of 1909.

Longitude of central meridian

1909 January 15.0 G.M.A.T. (J. D. 241 8322.0), 344°.41

Daily motion, 350°.891962

The longitude of the central meridian is given by $V - A_E$ where V is the Martian hour angle of the vernal equinox of Mars measured from the zero meridian. In order to preserve the zero point of the longitude system (344°.41 on J. D. 241 8322.0) with the adopted elements, the value of V for the epoch 1909 January 15.0 G.M.A.T. is 149°.475.

The independent argument is Ephemeris Time except where indicated. Values of ΔT were taken from *A. J.*, 57, 133, 1952 and the *American Ephemeris and Nautical Almanac* 1965, pg. vii, with an extrapolated value of $+36^s$ for 1966, 1967.

The positions of Mars used in the computation of the ephemeris are based on the new theory by G. M. Clemence.

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2406838.5	3.52	-2.1	22.09	84.91	-20.25	-26.45	-21.46	240.87
2406839.5	3.49	2.1	22.26	84.89	20.22	25.77	21.60	241.50
2406840.5	3.47	2.1	22.43	84.86	20.18	25.06	21.74	242.14
2406841.5	3.44	2.2	22.60	84.81	20.14	24.35	21.87	242.77
2406842.5	3.42	2.2	22.76	84.74	20.11	23.61	22.00	243.40
2406843.5	3.39	-2.2	22.92	84.66	-20.07	-22.86	-22.12	244.04
2406844.5	3.37	2.2	23.07	84.57	20.04	22.10	22.25	244.67
2406845.5	3.35	2.3	23.22	84.46	20.01	21.32	22.37	245.30
2406846.5	3.33	2.3	23.36	84.34	19.98	20.53	22.49	245.94
2406847.5	3.31	2.3	23.50	84.21	19.95	19.72	22.60	246.57
2406848.5	3.29	-2.3	23.64	84.07	-19.93	-18.90	-22.72	247.21
2406849.5	3.27	2.4	23.77	83.91	19.91	18.06	22.83	247.84
2406850.5	3.25	2.4	23.89	83.74	19.89	17.21	22.93	248.48
2406851.5	3.24	2.4	24.01	83.56	19.87	16.35	23.04	249.11
2406852.5	3.22	2.4	24.12	83.36	19.85	15.48	23.14	249.75
2406853.5	3.21	-2.5	24.23	83.16	-19.83	-14.59	-23.24	250.38
2406854.5	3.20	2.5	24.32	82.95	19.82	13.70	23.33	251.02
2406855.5	3.19	2.5	24.41	82.72	19.81	12.79	23.43	251.65
2406856.5	3.18	2.5	24.49	82.49	19.80	11.87	23.52	252.28
2406857.5	3.17	2.5	24.57	82.25	19.80	10.94	23.60	252.92
2406858.5	3.16	-2.5	24.63	82.00	-19.79	-10.01	-23.69	253.55
2406859.5	3.15	2.6	24.69	81.74	19.79	9.06	23.77	254.19
2406860.5	3.14	2.6	24.74	81.48	19.79	8.11	23.85	254.82
2406861.5	3.14	2.6	24.78	81.21	19.79	7.15	23.92	255.46
2406862.5	3.13	2.6	24.81	80.93	19.80	6.18	23.99	256.09
2406863.5	3.13	-2.6	24.83	80.65	-19.80	- 5.21	-24.06	256.72
2406864.5	3.13	2.6	24.85	80.36	19.81	4.24	24.13	257.36
2406865.5	3.13	2.6	24.85	80.08	19.83	3.26	24.19	257.99
2406866.5	3.13	2.6	24.84	79.79	19.84	2.28	24.25	258.63
2406867.5	3.13	2.6	24.83	79.49	19.86	1.29	24.30	259.26
2406868.5	3.14	-2.6	24.80	79.20	-19.88	- 0.31	-24.35	259.89
2406869.5	3.14	2.6	24.77	78.91	19.90	+ 0.67	24.40	260.52
2406870.5	3.14	2.6	24.72	78.62	19.92	1.66	24.45	261.16
2406871.5	3.15	2.6	24.67	78.33	19.95	2.64	24.49	261.79
2406872.5	3.16	2.6	24.61	78.05	19.98	3.62	24.53	262.42
2406873.5	3.17	-2.6	24.54	77.77	-20.01	+ 4.59	-24.57	263.05
2406874.5	3.18	2.6	24.46	77.49	20.04	5.56	24.60	263.69
2406875.5	3.19	2.6	24.37	77.22	20.08	6.53	24.63	264.32
2406876.5	3.21	2.5	24.27	76.95	20.12	7.49	24.66	264.95
2406877.5	3.22	2.5	24.16	76.69	20.16	8.44	24.69	265.58
2406878.5	3.23	-2.5	24.05	76.44	-20.20	+ 9.38	-24.71	266.21
2406879.5	3.25	2.5	23.93	76.20	20.24	10.32	24.72	266.84
2406880.5	3.27	2.4	23.80	75.97	20.29	11.25	24.74	267.47
2406881.5	3.29	2.4	23.67	75.75	20.34	12.16	24.75	268.10
2406882.5	3.31	2.4	23.52	75.53	20.39	13.07	24.76	268.73
2406883.5	3.33	-2.4	23.38	75.33	-20.45	+13.96	-24.76	269.36
2406884.5	3.35	2.3	23.22	75.13	20.50	14.85	24.76	269.99
2406885.5	3.37	2.3	23.07	74.95	20.56	15.72	24.76	270.61
2406886.5	3.40	2.3	22.90	74.78	20.62	16.58	24.76	271.24
2406887.5	3.42	2.3	22.73	74.63	20.68	17.43	24.75	271.87
2406888.5	3.45	-2.2	22.56	74.48	-20.75	+18.27	-24.74	272.50
2406889.5	3.47	2.2	22.38	74.35	20.81	19.09	24.72	273.12
2406890.5	3.50	2.2	22.20	74.23	20.88	19.90	24.71	273.75
2406891.5	3.53	2.1	22.02	74.12	20.95	20.69	24.69	274.37
2406892.5	3.56	2.1	21.83	74.03	21.02	21.47	24.66	275.00
2406893.5	3.59	-2.1	21.64	73.95	-21.10	+22.24	-24.64	275.62
2406894.5	3.63	2.1	21.45	73.88	21.17	22.99	24.61	276.25
2406895.5	3.66	2.0	21.26	73.83	21.25	23.73	24.57	276.87
2406896.5	3.69	2.0	21.06	73.79	21.32	24.45	24.54	277.49
2406897.5	3.73	2.0	20.86	73.77	21.40	25.16	24.50	278.11
2406898.5	3.76	-1.9	20.66	73.76	-21.48	+25.85	-24.46	278.74

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2406838.5	0.954	24.72	1.01	255.37	337.84	255.86	255.83	7 07.3	7 07.5
2406839.5	0.956	24.08	0.97	255.75	337.85	246.78	246.75	7 44.6	7 44.7
2406840.5	0.959	23.43	0.92	256.15	337.86	237.71	237.68	8 21.8	8 21.9
2406841.5	0.961	22.77	0.88	256.59	337.89	228.66	228.63	8 58.9	8 59.0
2406842.5	0.963	22.10	0.84	257.04	337.92	219.62	219.59	9 35.9	9 36.1
2406843.5	0.966	21.41	0.79	257.54	337.95	210.60	210.57	10 12.9	10 13.1
2406844.5	0.968	20.71	0.75	258.06	338.00	201.59	201.56	10 49.9	10 50.0
2406845.5	0.970	20.00	0.70	258.63	338.05	192.59	192.56	11 26.8	11 26.9
2406846.5	0.972	19.28	0.66	259.24	338.11	183.61	183.58	12 03.6	12 03.7
2406847.5	0.974	18.55	0.61	259.90	338.17	174.64	174.61	12 40.4	12 40.5
2406848.5	0.976	17.81	0.57	260.62	338.24	165.68	165.65	13 17.1	13 17.2
2406849.5	0.978	17.06	0.52	261.40	338.32	156.73	156.70	13 53.8	13 53.9
2406850.5	0.980	16.30	0.48	262.26	338.40	147.80	147.77	14 30.4	14 30.5
2406851.5	0.982	15.54	0.44	263.20	338.50	138.88	138.85	15 06.9	15 07.1
2406852.5	0.983	14.76	0.40	264.24	338.59	129.97	129.93	15 43.5	15 43.6
2406853.5	0.985	13.99	0.36	265.39	338.69	121.07	121.03	16 19.9	16 20.1
2406854.5	0.987	13.20	0.32	266.68	338.80	112.17	112.14	16 56.4	16 56.5
2406855.5	0.988	12.42	0.29	268.13	338.92	103.29	103.26	17 32.8	17 32.9
2406856.5	0.990	11.63	0.25	269.78	339.03	94.42	94.39	18 09.1	18 09.3
2406857.5	0.991	10.85	0.22	271.66	339.16	85.56	85.53	18 45.5	18 45.6
2406858.5	0.992	10.07	0.19	273.83	339.29	76.70	76.67	19 21.8	19 21.9
2406859.5	0.993	9.30	0.16	276.36	339.42	67.85	67.82	19 58.0	19 58.1
2406860.5	0.994	8.55	0.14	279.33	339.56	59.01	58.98	20 34.3	20 34.4
2406861.5	0.995	7.81	0.11	282.87	339.70	50.17	50.14	21 10.5	21 10.6
2406862.5	0.996	7.10	0.10	287.13	339.84	41.34	41.31	21 46.7	21 46.8
2406863.5	0.997	6.44	0.08	292.28	339.99	32.52	32.48	22 22.8	22 23.0
2406864.5	0.997	5.83	0.06	298.56	340.14	23.69	23.66	22 59.0	22 59.1
2406865.5	0.998	5.30	0.05	306.17	340.29	14.87	14.84	23 35.2	23 35.3
2406866.5	0.998	4.88	0.05	315.26	340.44	6.05	6.02	.. ..	.. ..
2406867.5	0.998	4.60	0.04	325.75	340.60	357.24	357.21	0 11.3	0 11.5
2406868.5	0.998	4.49	0.04	337.16	340.76	348.42	348.39	0 47.5	0 47.6
2406869.5	0.998	4.55	0.04	348.69	340.91	339.60	339.57	1 23.6	1 23.8
2406870.5	0.998	4.78	0.04	359.51	341.07	330.78	330.75	1 59.8	1 59.9
2406871.5	0.998	5.16	0.05	9.01	341.23	321.96	321.93	2 36.0	2 36.1
2406872.5	0.998	5.66	0.06	17.04	341.38	313.14	313.11	3 12.2	3 12.3
2406873.5	0.997	6.24	0.07	23.67	341.54	304.31	304.28	3 48.4	3 48.5
2406874.5	0.996	6.88	0.09	29.11	341.69	295.48	295.44	4 24.6	4 24.7
2406875.5	0.996	7.56	0.11	33.60	341.84	286.64	286.60	5 00.8	5 01.0
2406876.5	0.995	8.28	0.13	37.32	341.98	277.79	277.76	5 37.1	5 37.3
2406877.5	0.994	9.02	0.15	40.43	342.13	268.94	268.90	6 13.4	6 13.6
2406878.5	0.993	9.77	0.17	43.07	342.27	260.08	260.04	6 49.8	6 49.9
2406879.5	0.992	10.53	0.20	45.33	342.40	251.21	251.17	7 26.2	7 26.3
2406880.5	0.990	11.30	0.23	47.28	342.53	242.33	242.29	8 02.6	8 02.7
2406881.5	0.989	12.06	0.26	48.97	342.66	233.44	233.41	8 39.1	8 39.2
2406882.5	0.988	12.83	0.29	50.47	342.78	224.54	224.51	9 15.6	9 15.7
2406883.5	0.986	13.59	0.33	51.79	342.90	215.63	215.60	9 52.2	9 52.3
2406884.5	0.984	14.34	0.36	52.96	343.01	206.71	206.68	10 28.8	10 28.9
2406885.5	0.983	15.09	0.40	54.02	343.11	197.78	197.74	11 05.4	11 05.6
2406886.5	0.981	15.84	0.43	54.97	343.21	188.83	188.80	11 42.1	11 42.3
2406887.5	0.979	16.57	0.47	55.83	343.30	179.88	179.84	12 18.9	12 19.0
2406888.5	0.977	17.30	0.51	56.62	343.39	170.91	170.87	12 55.7	12 55.9
2406889.5	0.975	18.01	0.55	57.33	343.47	161.92	161.89	13 32.6	13 32.7
2406890.5	0.974	18.72	0.59	57.99	343.54	152.93	152.90	14 09.5	14 09.7
2406891.5	0.972	19.42	0.63	58.59	343.60	143.92	143.89	14 46.5	14 46.7
2406892.5	0.970	20.10	0.66	59.14	343.66	134.90	134.87	15 23.6	15 23.7
2406893.5	0.968	20.77	0.70	59.66	343.71	125.86	125.83	16 00.7	16 00.8
2406894.5	0.965	21.43	0.74	60.13	343.75	116.81	116.78	16 37.9	16 38.0
2406895.5	0.963	22.08	0.78	60.57	343.78	107.75	107.72	17 15.1	17 15.2
2406896.5	0.961	22.72	0.82	60.98	343.81	98.67	98.64	17 52.4	17 52.5
2406897.5	0.959	23.34	0.85	61.36	343.83	89.58	89.55	18 29.8	18 29.9
2406898.5	0.957	23.95	0.89	61.72	343.84	80.47	80.44	19 07.2	19 07.3

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2407636.5	4.32	-1.5	18.02	156.19	- 8.72	-23.93	-18.85	309.53
2407637.5	4.29	1.6	18.13	156.11	8.81	23.25	18.68	310.12
2407638.5	4.27	1.6	18.23	156.00	8.90	22.56	18.52	310.70
2407639.5	4.24	1.6	18.33	155.89	9.00	21.86	18.35	311.28
2407640.5	4.22	1.6	18.43	155.76	9.10	21.14	18.18	311.86
2407641.5	4.20	-1.7	18.53	155.62	- 9.22	-20.42	-18.01	312.44
2407642.5	4.18	1.7	18.62	155.46	9.33	19.69	17.84	313.01
2407643.5	4.16	1.7	18.71	155.30	9.46	18.94	17.66	313.59
2407644.5	4.14	1.7	18.80	155.12	9.59	18.19	17.49	314.17
2407645.5	4.12	1.7	18.88	154.93	9.73	17.42	17.31	314.74
2407646.5	4.10	-1.8	18.95	154.72	- 9.87	-16.65	-17.13	315.32
2407647.5	4.09	1.8	19.02	154.51	10.02	15.87	16.95	315.89
2407648.5	4.08	1.8	19.09	154.28	10.18	15.07	16.77	316.46
2407649.5	4.06	1.8	19.15	154.05	10.33	14.27	16.59	317.03
2407650.5	4.05	1.8	19.20	153.80	10.50	13.47	16.41	317.60
2407651.5	4.04	-1.8	19.25	153.55	-10.67	-12.65	-16.22	318.17
2407652.5	4.03	1.9	19.29	153.29	10.84	11.83	16.04	318.74
2407653.5	4.02	1.9	19.32	153.01	11.01	11.00	15.85	319.31
2407654.5	4.02	1.9	19.35	152.73	11.19	10.16	15.66	319.87
2407655.5	4.01	1.9	19.38	152.45	11.38	9.32	15.47	320.44
2407656.5	4.01	-1.9	19.39	152.15	-11.56	- 8.48	-15.28	321.00
2407657.5	4.01	1.9	19.40	151.85	11.75	7.63	15.09	321.57
2407658.5	4.01	1.9	19.40	151.55	11.94	6.77	14.90	322.13
2407659.5	4.01	2.0	19.40	151.24	12.13	5.92	14.71	322.69
2407660.5	4.01	2.0	19.38	150.92	12.32	5.06	14.51	323.25
2407661.5	4.02	-2.0	19.36	150.60	-12.52	- 4.20	-14.32	323.81
2407662.5	4.02	2.0	19.34	150.28	12.71	3.34	14.12	324.37
2407663.5	4.03	2.0	19.30	149.96	12.90	2.48	13.93	324.93
2407664.5	4.04	2.0	19.26	149.64	13.10	1.62	13.73	325.49
2407665.5	4.05	2.0	19.21	149.32	13.29	- 0.76	13.53	326.04
2407666.5	4.06	-2.0	19.15	148.99	-13.48	+ 0.09	-13.33	326.60
2407667.5	4.07	2.0	19.09	148.67	13.67	0.95	13.13	327.15
2407668.5	4.09	2.0	19.02	148.35	13.86	1.79	12.93	327.70
2407669.5	4.11	1.9	18.94	148.04	14.04	2.64	12.73	328.26
2407670.5	4.12	1.9	18.86	147.73	14.23	3.47	12.53	328.81
2407671.5	4.14	-1.9	18.77	147.42	-14.41	+ 4.30	-12.33	329.36
2407672.5	4.16	1.9	18.68	147.12	14.58	5.13	12.12	329.91
2407673.5	4.19	1.8	18.57	146.82	14.75	5.94	11.92	330.46
2407674.5	4.21	1.8	18.47	146.53	14.92	6.75	11.72	331.00
2407675.5	4.24	1.8	18.36	146.25	15.08	7.55	11.51	331.55
2407676.5	4.27	-1.7	18.24	145.98	-15.24	+ 8.34	-11.31	332.09
2407677.5	4.29	1.7	18.12	145.71	15.40	9.12	11.10	332.64
2407678.5	4.32	1.7	17.99	145.46	15.55	9.88	10.89	333.18
2407679.5	4.36	1.7	17.86	145.21	15.69	10.64	10.69	333.73
2407680.5	4.39	1.6	17.72	144.98	15.83	11.38	10.48	334.27
2407681.5	4.42	-1.6	17.59	144.75	-15.96	+12.12	-10.27	334.81
2407682.5	4.46	1.6	17.45	144.54	16.09	12.84	10.06	335.35
2407683.5	4.50	1.5	17.30	144.34	16.21	13.55	9.85	335.89
2407684.5	4.53	1.5	17.15	144.14	16.33	14.24	9.64	336.43
2407685.5	4.57	1.5	17.00	143.96	16.44	14.92	9.43	336.96
2407686.5	4.62	-1.4	16.85	143.80	-16.54	+15.59	- 9.23	337.50
2407687.5	4.66	1.4	16.70	143.64	16.64	16.24	9.01	338.03
2407688.5	4.70	1.4	16.54	143.50	16.73	16.88	8.80	338.57
2407689.5	4.75	1.3	16.39	143.37	16.82	17.51	8.59	339.10
2407690.5	4.79	1.3	16.23	143.25	16.90	18.12	8.38	339.63
2407691.5	4.84	-1.3	16.07	143.14	-16.97	+18.72	- 8.17	340.17
2407692.5	4.89	1.2	15.91	143.05	17.04	19.31	7.96	340.70
2407693.5	4.94	1.2	15.75	142.97	17.10	19.88	7.75	341.23
2407694.5	4.99	1.2	15.59	142.90	17.16	20.43	7.54	341.75
2407695.5	5.04	1.1	15.43	142.85	17.21	20.97	7.32	342.28
2407696.5	5.09	-1.1	15.27	142.81	-17.25	+21.50	- 7.11	342.81

Julian Day	k	i	Defect of Illumination	Position Angle of		Central Meridian		Time of Transit of Zero Meridian	
				Defect	Axis	E.T.	U.T.	E.T.	U.T.
		°	″	°	°	°	°	h m	h m
2407636.5	0.952	25.30	0.86	259.05	322.94	116.17	116.14	16 40.4	16 40.5
2407637.5	0.955	24.60	0.82	259.03	322.91	107.16	107.12	17 17.3	17 17.4
2407638.5	0.957	23.89	0.78	258.99	322.88	98.16	98.12	17 54.2	17 54.3
2407639.5	0.960	23.17	0.74	258.95	322.85	89.17	89.14	18 31.0	18 31.2
2407640.5	0.962	22.43	0.70	258.91	322.81	80.20	80.16	19 07.8	19 07.9
2407641.5	0.965	21.68	0.66	258.85	322.77	71.24	71.20	19 44.5	19 44.6
2407642.5	0.967	20.91	0.61	258.80	322.73	62.29	62.25	20 21.2	20 21.3
2407643.5	0.969	20.13	0.57	258.73	322.69	53.35	53.32	20 57.8	20 57.9
2407644.5	0.972	19.34	0.53	258.66	322.65	44.43	44.39	21 34.3	21 34.5
2407645.5	0.974	18.54	0.49	258.58	322.60	35.51	35.48	22 10.9	22 11.0
2407646.5	0.976	17.72	0.45	258.50	322.55	26.61	26.58	22 47.3	22 47.5
2407647.5	0.978	16.90	0.41	258.41	322.50	17.72	17.69	23 23.7	23 23.9
2407648.5	0.980	16.06	0.37	258.31	322.45	8.84	8.81	.. .. .	.. .. .
2407649.5	0.982	15.21	0.34	258.21	322.40	359.97	359.94	0 00.1	0 00.3
2407650.5	0.984	14.36	0.30	258.10	322.35	351.11	351.08	0 36.5	0 36.6
2407651.5	0.986	13.49	0.27	257.98	322.30	342.26	342.23	1 12.7	1 12.9
2407652.5	0.988	12.62	0.23	257.85	322.24	333.42	333.38	1 49.0	1 49.1
2407653.5	0.990	11.73	0.20	257.72	322.19	324.58	324.55	2 25.2	2 25.4
2407654.5	0.991	10.84	0.17	257.58	322.13	315.76	315.72	3 01.4	3 01.6
2407655.5	0.992	9.94	0.15	257.42	322.08	306.94	306.90	3 37.6	3 37.7
2407656.5	0.994	9.04	0.12	257.26	322.02	298.12	298.09	4 13.7	4 13.8
2407657.5	0.995	8.13	0.10	257.07	321.97	289.32	289.28	4 49.8	4 50.0
2407658.5	0.996	7.22	0.08	256.88	321.92	280.51	280.48	5 25.9	5 26.0
2407659.5	0.997	6.30	0.06	256.65	321.86	271.72	271.68	6 02.0	6 02.1
2407660.5	0.998	5.38	0.04	256.38	321.81	262.92	262.89	6 38.0	6 38.2
2407661.5	0.998	4.46	0.03	256.04	321.76	254.13	254.10	7 14.1	7 14.2
2407662.5	0.999	3.54	0.02	255.60	321.71	245.34	245.31	7 50.1	7 50.2
2407663.5	0.999	2.62	0.01	254.92	321.66	236.55	236.52	8 26.1	8 26.3
2407664.5	1.000	1.69	0.00	253.65	321.62	227.77	227.73	9 02.2	9 02.3
2407665.5	1.000	0.78	0.00	249.65	321.57	218.98	218.95	9 38.2	9 38.3
2407666.5	1.000	0.18	0.00	109.50	321.53	210.19	210.16	10 14.2	10 14.4
2407667.5	1.000	1.07	0.00	81.70	321.49	201.40	201.37	10 50.3	10 50.4
2407668.5	1.000	1.98	0.01	79.20	321.45	192.61	192.58	11 26.3	11 26.5
2407669.5	0.999	2.89	0.01	78.20	321.41	183.81	183.78	12 02.4	12 02.5
2407670.5	0.999	3.79	0.02	77.62	321.37	175.01	174.98	12 38.5	12 38.6
2407671.5	0.998	4.68	0.03	77.23	321.34	166.21	166.17	13 14.6	13 14.8
2407672.5	0.998	5.57	0.04	76.92	321.31	157.39	157.36	13 50.8	13 50.9
2407673.5	0.997	6.44	0.06	76.66	321.28	148.57	148.54	14 27.0	14 27.1
2407674.5	0.996	7.31	0.08	76.45	321.25	139.75	139.72	15 03.2	15 03.3
2407675.5	0.995	8.17	0.09	76.25	321.22	130.92	130.88	15 39.4	15 39.5
2407676.5	0.994	9.02	0.11	76.08	321.20	122.07	122.04	16 15.7	16 15.8
2407677.5	0.993	9.86	0.13	75.92	321.17	113.22	113.19	16 52.0	16 52.1
2407678.5	0.991	10.69	0.16	75.77	321.15	104.36	104.33	17 28.4	17 28.5
2407679.5	0.990	11.50	0.18	75.62	321.13	95.49	95.46	18 04.8	18 04.9
2407680.5	0.989	12.31	0.20	75.49	321.11	86.61	86.58	18 41.2	18 41.4
2407681.5	0.987	13.10	0.23	75.37	321.10	77.72	77.69	19 17.7	19 17.9
2407682.5	0.985	13.88	0.25	75.25	321.08	68.82	68.79	19 54.3	19 54.4
2407683.5	0.984	14.64	0.28	75.14	321.07	59.91	59.87	20 30.9	20 31.0
2407684.5	0.982	15.40	0.31	75.03	321.05	50.98	50.95	21 07.6	21 07.7
2407685.5	0.980	16.13	0.33	74.93	321.04	42.04	42.01	21 44.3	21 44.4
2407686.5	0.979	16.86	0.36	74.83	321.03	33.09	33.06	22 21.0	22 21.2
2407687.5	0.977	17.57	0.39	74.74	321.02	24.13	24.10	22 57.8	22 58.0
2407688.5	0.975	18.26	0.42	74.65	321.01	15.15	15.12	23 34.7	23 34.8
2407689.5	0.973	18.94	0.44	74.57	321.00	6.17	6.13	.. .. .	.. .. .
2407690.5	0.971	19.61	0.47	74.49	320.99	357.17	357.13	0 11.6	0 11.8
2407691.5	0.969	20.26	0.50	74.42	320.99	348.15	348.12	0 48.6	0 48.7
2407692.5	0.967	20.90	0.52	74.35	320.98	339.12	339.09	1 25.7	1 25.8
2407693.5	0.965	21.53	0.55	74.28	320.97	330.08	330.05	2 02.7	2 02.9
2407694.5	0.963	22.13	0.57	74.22	320.97	321.03	321.00	2 39.9	2 40.0
2407695.5	0.961	22.73	0.60	74.17	320.96	311.96	311.93	3 17.1	3 17.2
2407696.5	0.959	23.31	0.62	74.11	320.95	302.88	302.85	3 54.4	3 54.5

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2408411.5	5.50	-0.9	14.14	199.84	+ 8.06	-22.37	− 1.17	357.21
2408412.5	5.46	0.9	14.23	199.73	7.96	21.80	0.96	357.72
2408413.5	5.43	0.9	14.32	199.61	7.85	21.23	0.75	358.22
2408414.5	5.40	0.9	14.41	199.47	7.73	20.64	0.54	358.72
2408415.5	5.36	1.0	14.50	199.32	7.61	20.03	0.33	359.22
2408416.5	5.33	-1.0	14.58	199.16	+ 7.48	-19.42	− 0.12	359.72
2408417.5	5.30	1.0	14.67	198.99	7.35	18.79	+ 0.09	0.21
2408418.5	5.27	1.0	14.75	198.80	7.22	18.15	0.30	0.71
2408419.5	5.25	1.1	14.82	198.60	7.07	17.51	0.51	1.21
2408420.5	5.22	1.1	14.90	198.39	6.93	16.84	0.71	1.70
2408421.5	5.20	-1.1	14.97	198.17	+ 6.77	-16.17	+ 0.92	2.20
2408422.5	5.17	1.1	15.04	197.94	6.62	15.49	1.13	2.69
2408423.5	5.15	1.1	15.10	197.69	6.46	14.80	1.33	3.19
2408424.5	5.13	1.1	15.16	197.44	6.29	14.10	1.54	3.68
2408425.5	5.11	1.2	15.22	197.18	6.12	13.39	1.75	4.17
2408426.5	5.09	-1.2	15.27	196.90	+ 5.95	-12.67	+ 1.95	4.66
2408427.5	5.08	1.2	15.32	196.62	5.77	11.94	2.16	5.15
2408428.5	5.06	1.2	15.36	196.33	5.59	11.20	2.36	5.64
2408429.5	5.05	1.2	15.40	196.02	5.40	10.45	2.56	6.13
2408430.5	5.04	1.3	15.43	195.72	5.22	9.70	2.77	6.62
2408431.5	5.03	-1.3	15.46	195.40	+ 5.03	− 8.94	+ 2.97	7.11
2408432.5	5.02	1.3	15.49	195.08	4.83	8.17	3.17	7.60
2408433.5	5.02	1.3	15.50	194.75	4.64	7.40	3.38	8.08
2408434.5	5.01	1.3	15.52	194.42	4.45	6.63	3.58	8.57
2408435.5	5.01	1.3	15.53	194.08	4.25	5.85	3.78	9.05
2408436.5	5.01	-1.3	15.53	193.74	+ 4.05	− 5.07	+ 3.98	9.53
2408437.5	5.01	1.3	15.52	193.39	3.86	4.28	4.18	10.02
2408438.5	5.01	1.3	15.52	193.05	3.66	3.49	4.38	10.50
2408439.5	5.02	1.4	15.50	192.70	3.47	2.71	4.58	10.98
2408440.5	5.02	1.4	15.48	192.35	3.27	1.92	4.78	11.46
2408441.5	5.03	-1.4	15.46	192.00	+ 3.08	− 1.13	+ 4.97	11.94
2408442.5	5.04	1.3	15.42	191.66	2.89	− 0.34	5.17	12.42
2408443.5	5.05	1.3	15.39	191.31	2.70	+ 0.44	5.37	12.90
2408444.5	5.07	1.3	15.35	190.97	2.51	1.22	5.56	13.38
2408445.5	5.08	1.3	15.30	190.63	2.33	2.00	5.76	13.86
2408446.5	5.10	-1.3	15.25	190.29	+ 2.15	+ 2.78	+ 5.95	14.34
2408447.5	5.12	1.3	15.19	189.96	1.98	3.55	6.15	14.81
2408448.5	5.14	1.2	15.13	189.63	1.80	4.31	6.34	15.29
2408449.5	5.16	1.2	15.06	189.31	1.63	5.07	6.54	15.77
2408450.5	5.19	1.2	14.99	188.99	1.47	5.83	6.73	16.24
2408451.5	5.21	-1.2	14.92	188.68	+ 1.31	+ 6.57	+ 6.92	16.71
2408452.5	5.24	1.1	14.84	188.38	1.16	7.31	7.11	17.19
2408453.5	5.27	1.1	14.76	188.08	1.01	8.04	7.30	17.66
2408454.5	5.30	1.1	14.67	187.79	0.86	8.77	7.49	18.13
2408455.5	5.33	1.1	14.58	187.51	0.73	9.48	7.68	18.60
2408456.5	5.37	-1.0	14.49	187.25	+ 0.59	+10.19	+ 7.87	19.07
2408457.5	5.40	1.0	14.39	186.98	0.47	10.88	8.06	19.55
2408458.5	5.44	1.0	14.29	186.73	0.35	11.57	8.24	20.02
2408459.5	5.48	1.0	14.19	186.49	0.23	12.24	8.43	20.48
2408460.5	5.52	0.9	14.09	186.26	0.13	12.91	8.61	20.95
2408461.5	5.56	-0.9	13.98	186.04	+ 0.02	+13.56	+ 8.80	21.42
2408462.5	5.61	0.9	13.87	185.83	− 0.07	14.21	8.98	21.89
2408463.5	5.65	0.8	13.76	185.64	0.16	14.84	9.17	22.36
2408464.5	5.70	0.8	13.65	185.45	0.24	15.46	9.35	22.82
2408465.5	5.75	0.8	13.54	185.28	0.32	16.07	9.53	23.29
2408466.5	5.79	-0.8	13.42	185.11	− 0.38	+16.67	+ 9.71	23.75
2408467.5	5.84	0.7	13.31	184.96	0.44	17.25	9.89	24.22
2408468.5	5.90	0.7	13.19	184.82	0.50	17.83	10.07	24.68
2408469.5	5.95	0.7	13.08	184.69	0.55	18.39	10.25	25.15
2408470.5	6.00	0.6	12.96	184.58	0.59	18.94	10.43	25.61
2408471.5	6.06	-0.6	12.84	184.48	− 0.62	+19.48	+10.61	26.07

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2408411.5	0.956	24.13	0.62	273.74	342.26	213.50	213.47	10 01.0	10 01.1
2408412.5	0.959	23.49	0.59	273.51	342.18	204.51	204.48	10 37.8	10 38.0
2408413.5	0.961	22.84	0.56	273.25	342.09	195.54	195.50	11 14.6	11 14.8
2408414.5	0.963	22.17	0.53	272.98	342.00	186.57	186.54	11 51.4	11 51.5
2408415.5	0.965	21.49	0.50	272.69	341.90	177.62	177.59	12 28.1	12 28.2
2408416.5	0.967	20.80	0.48	272.37	341.78	168.68	168.65	13 04.7	13 04.9
2408417.5	0.970	20.09	0.45	272.03	341.67	159.76	159.72	13 41.3	13 41.4
2408418.5	0.972	19.37	0.42	271.66	341.54	150.84	150.81	14 17.8	14 18.0
2408419.5	0.974	18.65	0.39	271.26	341.40	141.94	141.91	14 54.3	14 54.5
2408420.5	0.976	17.90	0.36	270.83	341.26	133.05	133.01	15 30.8	15 30.9
2408421.5	0.978	17.15	0.33	270.36	341.11	124.17	124.13	16 07.2	16 07.3
2408422.5	0.980	16.39	0.31	269.86	340.95	115.30	115.26	16 43.5	16 43.6
2408423.5	0.982	15.62	0.28	269.30	340.79	106.44	106.41	17 19.8	17 19.9
2408424.5	0.983	14.83	0.25	268.69	340.62	97.59	97.56	17 56.1	17 56.2
2408425.5	0.985	14.04	0.23	268.03	340.44	88.75	88.72	18 32.3	18 32.4
2408426.5	0.987	13.24	0.20	267.28	340.26	79.92	79.89	19 08.4	19 08.6
2408427.5	0.988	12.43	0.18	266.46	340.07	71.10	71.07	19 44.6	19 44.7
2408428.5	0.990	11.62	0.16	265.54	339.88	62.29	62.26	20 20.7	20 20.8
2408429.5	0.991	10.80	0.14	264.49	339.68	53.49	53.45	20 56.8	20 56.9
2408430.5	0.992	9.97	0.12	263.29	339.48	44.69	44.66	21 32.8	21 32.9
2408431.5	0.994	9.14	0.10	261.89	339.27	35.90	35.87	22 08.8	22 09.0
2408432.5	0.995	8.31	0.08	260.25	339.06	27.11	27.08	22 44.8	22 45.0
2408433.5	0.996	7.49	0.07	258.28	338.85	18.34	18.30	23 20.8	23 20.9
2408434.5	0.997	6.66	0.05	255.85	338.64	9.56	9.53	23 56.8	23 56.9
2408435.5	0.997	5.85	0.04	252.80	338.42	0.79	0.76	.. .. .	.. .. .
2408436.5	0.998	5.05	0.03	248.83	338.20	352.03	351.99	0 32.7	0 32.8
2408437.5	0.999	4.28	0.02	243.48	337.98	343.26	343.23	1 08.6	1 08.8
2408438.5	0.999	3.55	0.01	235.95	337.76	334.50	334.47	1 44.5	1 44.7
2408439.5	0.999	2.91	0.01	224.97	337.54	325.74	325.70	2 20.5	2 20.6
2408440.5	1.000	2.43	0.01	208.94	337.32	316.98	316.94	2 56.4	2 56.5
2408441.5	1.000	2.20	0.01	187.63	337.10	308.21	308.18	3 32.3	3 32.4
2408442.5	1.000	2.31	0.01	165.24	336.88	299.45	299.42	4 08.2	4 08.4
2408443.5	0.999	2.71	0.01	147.18	336.66	290.69	290.65	4 44.2	4 44.3
2408444.5	0.999	3.29	0.01	134.59	336.45	281.92	281.89	5 20.1	5 20.3
2408445.5	0.999	3.97	0.02	126.02	336.24	273.15	273.11	5 56.1	5 56.2
2408446.5	0.998	4.71	0.03	120.01	336.03	264.37	264.34	6 32.1	6 32.2
2408447.5	0.998	5.48	0.03	115.61	335.83	255.59	255.56	7 08.1	7 08.2
2408448.5	0.997	6.26	0.05	112.28	335.63	246.81	246.77	7 44.1	7 44.2
2408449.5	0.996	7.05	0.06	109.65	335.43	238.02	237.98	8 20.2	8 20.3
2408450.5	0.995	7.84	0.07	107.54	335.24	229.22	229.19	8 56.2	8 56.4
2408451.5	0.994	8.63	0.08	105.78	335.06	220.41	220.38	9 32.4	9 32.5
2408452.5	0.993	9.42	0.10	104.31	334.87	211.60	211.57	10 08.5	10 08.6
2408453.5	0.992	10.20	0.12	103.04	334.70	202.78	202.75	10 44.7	10 44.8
2408454.5	0.991	10.97	0.13	101.93	334.53	193.95	193.92	11 20.9	11 21.0
2408455.5	0.990	11.74	0.15	100.96	334.37	185.12	185.08	11 57.2	11 57.3
2408456.5	0.988	12.50	0.17	100.10	334.21	176.27	176.24	12 33.5	12 33.6
2408457.5	0.987	13.24	0.19	99.32	334.06	167.41	167.38	13 09.8	13 09.9
2408458.5	0.985	13.98	0.21	98.63	333.91	158.55	158.51	13 46.2	13 46.3
2408459.5	0.984	14.70	0.23	97.99	333.78	149.67	149.64	14 22.6	14 22.8
2408460.5	0.982	15.42	0.25	97.41	333.64	140.78	140.75	14 59.1	14 59.2
2408461.5	0.980	16.12	0.27	96.88	333.52	131.88	131.85	15 35.6	15 35.8
2408462.5	0.979	16.81	0.30	96.39	333.40	122.97	122.94	16 12.2	16 12.3
2408463.5	0.977	17.48	0.32	95.93	333.29	114.05	114.02	16 48.8	16 49.0
2408464.5	0.975	18.14	0.34	95.51	333.19	105.12	105.09	17 25.5	17 25.6
2408465.5	0.973	18.79	0.36	95.13	333.09	96.18	96.14	18 02.2	18 02.4
2408466.5	0.972	19.43	0.38	94.76	333.00	87.22	87.19	18 39.0	18 39.1
2408467.5	0.970	20.05	0.40	94.43	332.92	78.25	78.22	19 15.8	19 16.0
2408468.5	0.968	20.66	0.42	94.12	332.85	69.27	69.24	19 52.7	19 52.9
2408469.5	0.966	21.25	0.44	93.83	332.78	60.28	60.24	20 29.7	20 29.8
2408470.5	0.964	21.83	0.46	93.56	332.72	51.27	51.24	21 06.7	21 06.8
2408471.5	0.962	22.40	0.48	93.30	332.66	42.25	42.22	21 43.7	21 43.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2409177.5	6.29	-0.5	12.37	235.60	+18.88	-23.36	+13.82	34.78
2409178.5	6.24	0.5	12.46	235.47	18.81	22.79	13.98	35.24
2409179.5	6.20	0.5	12.55	235.32	18.73	22.21	14.14	35.69
2409180.5	6.15	0.6	12.64	235.16	18.65	21.61	14.30	36.14
2409181.5	6.11	0.6	12.73	234.99	18.57	21.00	14.46	36.59
2409182.5	6.07	-0.6	12.81	234.80	+18.49	-20.37	+14.62	37.04
2409183.5	6.03	0.6	12.90	234.60	18.40	19.74	14.77	37.50
2409184.5	5.99	0.7	12.98	234.39	18.32	19.09	14.93	37.95
2409185.5	5.96	0.7	13.06	234.16	18.22	18.42	15.08	38.40
2409186.5	5.92	0.7	13.14	233.92	18.13	17.74	15.23	38.85
2409187.5	5.89	-0.7	13.21	233.67	+18.03	-17.05	+15.38	39.30
2409188.5	5.86	0.8	13.28	233.41	17.93	16.35	15.53	39.75
2409189.5	5.82	0.8	13.35	233.13	17.83	15.64	15.68	40.19
2409190.5	5.79	0.8	13.42	232.84	17.73	14.91	15.83	40.64
2409191.5	5.77	0.8	13.49	232.55	17.62	14.17	15.98	41.09
2409192.5	5.74	-0.8	13.55	232.24	+17.52	-13.42	+16.13	41.54
2409193.5	5.72	0.9	13.61	231.92	17.40	12.66	16.27	41.99
2409194.5	5.69	0.9	13.66	231.59	17.29	11.89	16.42	42.43
2409195.5	5.67	0.9	13.71	231.25	17.18	11.11	16.56	42.88
2409196.5	5.65	0.9	13.76	230.90	17.06	10.33	16.70	43.33
2409197.5	5.64	-0.9	13.80	230.55	+16.95	- 9.53	+16.84	43.77
2409198.5	5.62	0.9	13.84	230.19	16.83	8.72	16.99	44.22
2409199.5	5.61	1.0	13.87	229.82	16.71	7.91	17.12	44.66
2409200.5	5.59	1.0	13.90	229.44	16.59	7.09	17.26	45.11
2409201.5	5.58	1.0	13.93	229.06	16.47	6.27	17.40	45.55
2409202.5	5.57	-1.0	13.95	228.68	+16.35	- 5.44	+17.54	46.00
2409203.5	5.57	1.0	13.97	228.29	16.22	4.61	17.67	46.44
2409204.5	5.56	1.0	13.98	227.90	16.10	3.77	17.81	46.89
2409205.5	5.56	1.0	13.99	227.50	15.98	2.93	17.94	47.33
2409206.5	5.56	1.0	13.99	227.11	15.86	2.09	18.07	47.77
2409207.5	5.56	-1.0	13.99	226.71	+15.74	- 1.25	+18.20	48.22
2409208.5	5.56	1.0	13.98	226.32	15.62	- 0.41	18.33	48.66
2409209.5	5.57	1.0	13.97	225.92	15.50	+ 0.43	18.46	49.10
2409210.5	5.58	1.0	13.95	225.53	15.38	1.27	18.59	49.55
2409211.5	5.58	1.0	13.93	225.14	15.27	2.11	18.71	49.99
2409212.5	5.59	-1.0	13.90	224.75	+15.15	+ 2.95	+18.84	50.43
2409213.5	5.61	1.0	13.87	224.36	15.04	3.78	18.96	50.87
2409214.5	5.62	1.0	13.84	223.98	14.93	4.61	19.08	51.31
2409215.5	5.64	0.9	13.80	223.61	14.83	5.43	19.21	51.76
2409216.5	5.65	0.9	13.76	223.24	14.72	6.25	19.33	52.20
2409217.5	5.67	-0.9	13.71	222.88	+14.62	+ 7.06	+19.45	52.64
2409218.5	5.70	0.9	13.66	222.52	14.52	7.87	19.56	53.08
2409219.5	5.72	0.9	13.60	222.17	14.43	8.67	19.68	53.52
2409220.5	5.74	0.8	13.54	221.83	14.34	9.46	19.80	53.96
2409221.5	5.77	0.8	13.48	221.50	14.25	10.24	19.91	54.40
2409222.5	5.80	-0.8	13.41	221.18	+14.16	+11.02	+20.03	54.84
2409223.5	5.83	0.8	13.35	220.87	14.08	11.78	20.14	55.28
2409224.5	5.86	0.8	13.27	220.56	14.01	12.54	20.25	55.72
2409225.5	5.89	0.7	13.20	220.27	13.93	13.28	20.36	56.16
2409226.5	5.93	0.7	13.12	219.99	13.86	14.02	20.47	56.60
2409227.5	5.96	-0.7	13.04	219.72	+13.80	+14.75	+20.58	57.04
2409228.5	6.00	0.7	12.96	219.46	13.74	15.46	20.68	57.47
2409229.5	6.04	0.6	12.87	219.21	13.69	16.17	20.79	57.91
2409230.5	6.08	0.6	12.79	218.97	13.64	16.86	20.89	58.35
2409231.5	6.12	0.6	12.70	218.75	13.59	17.54	20.99	58.79
2409232.5	6.17	-0.6	12.61	218.53	+13.55	+18.21	+21.09	59.23
2409233.5	6.21	0.5	12.52	218.33	13.52	18.87	21.19	59.67
2409234.5	6.26	0.5	12.43	218.14	13.48	19.51	21.29	60.10
2409235.5	6.31	0.5	12.33	217.97	13.46	20.15	21.39	60.54
2409236.5	6.35	0.5	12.24	217.81	13.44	20.77	21.49	60.98
2409237.5	6.41	-0.4	12.14	217.66	+13.42	+21.38	+21.58	61.42

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2409177.5	0.960	22.95	0.49	284.64	5.45	40.80	40.77	21 49.4	21 49.5
2409178.5	0.962	22.36	0.47	284.38	5.37	31.83	31.80	22 26.1	22 26.3
2409179.5	0.964	21.76	0.45	284.09	5.28	22.88	22.85	23 02.8	23 02.9
2409180.5	0.966	21.15	0.43	283.79	5.18	13.94	13.91	23 39.4	23 39.5
2409181.5	0.968	20.53	0.40	283.47	5.07	5.02	4.99	.. ...	.. ...
2409182.5	0.970	19.89	0.38	283.12	4.96	356.11	356.08	0 16.0	0 16.1
2409183.5	0.972	19.24	0.36	282.75	4.83	347.21	347.18	0 52.5	0 52.6
2409184.5	0.974	18.58	0.34	282.34	4.70	338.33	338.29	1 28.9	1 29.0
2409185.5	0.976	17.91	0.32	281.91	4.56	329.45	329.42	2 05.3	2 05.4
2409186.5	0.978	17.23	0.29	281.44	4.41	320.59	320.56	2 41.6	2 41.7
2409187.5	0.979	16.53	0.27	280.92	4.25	311.74	311.71	3 17.9	3 18.0
2409188.5	0.981	15.83	0.25	280.37	4.09	302.91	302.87	3 54.1	3 54.2
2409189.5	0.983	15.11	0.23	279.76	3.92	294.08	294.05	4 30.3	4 30.4
2409190.5	0.984	14.39	0.21	279.09	3.74	285.27	285.23	5 06.4	5 06.6
2409191.5	0.986	13.65	0.19	278.35	3.55	276.46	276.43	5 42.5	5 42.6
2409192.5	0.987	12.91	0.17	277.53	3.35	267.67	267.64	6 18.6	6 18.7
2409193.5	0.989	12.16	0.15	276.61	3.15	258.89	258.86	6 54.5	6 54.7
2409194.5	0.990	11.41	0.13	275.58	2.94	250.11	250.08	7 30.5	7 30.6
2409195.5	0.991	10.64	0.12	274.41	2.73	241.35	241.32	8 06.4	8 06.6
2409196.5	0.993	9.88	0.10	273.07	2.51	232.59	232.56	8 42.3	8 42.5
2409197.5	0.994	9.11	0.09	271.51	2.28	223.84	223.81	9 18.2	9 18.3
2409198.5	0.995	8.34	0.07	269.68	2.05	215.10	215.07	9 54.0	9 54.1
2409199.5	0.996	7.57	0.06	267.49	1.81	206.37	206.33	10 29.8	10 29.9
2409200.5	0.996	6.81	0.05	264.83	1.57	197.64	197.60	11 05.6	11 05.7
2409201.5	0.997	6.06	0.04	261.54	1.33	188.91	188.88	11 41.3	11 41.5
2409202.5	0.998	5.33	0.03	257.36	1.08	180.19	180.16	12 17.1	12 17.2
2409203.5	0.998	4.64	0.02	251.93	0.83	171.47	171.44	12 52.8	12 53.0
2409204.5	0.999	3.99	0.02	244.69	0.58	162.76	162.72	13 28.5	13 28.7
2409205.5	0.999	3.42	0.01	234.89	0.32	154.04	154.01	14 04.3	14 04.4
2409206.5	0.999	2.98	0.01	221.79	0.06	145.33	145.30	14 40.0	14 40.1
2409207.5	0.999	2.74	0.01	205.39	359.81	136.62	136.59	15 15.7	15 15.8
2409208.5	0.999	2.74	0.01	187.54	359.55	127.91	127.87	15 51.4	15 51.5
2409209.5	0.999	2.99	0.01	171.27	359.29	119.19	119.16	16 27.1	16 27.3
2409210.5	0.999	3.43	0.01	158.31	359.03	110.48	110.44	17 02.9	17 03.0
2409211.5	0.999	4.00	0.02	148.64	358.78	101.76	101.73	17 38.6	17 38.7
2409212.5	0.998	4.64	0.02	141.47	358.52	93.04	93.00	18 14.4	18 14.5
2409213.5	0.998	5.34	0.03	136.09	358.27	84.31	84.28	18 50.2	18 50.3
2409214.5	0.997	6.06	0.04	131.95	358.02	75.58	75.54	19 26.0	19 26.1
2409215.5	0.996	6.80	0.05	128.67	357.78	66.84	66.81	20 01.8	20 02.0
2409216.5	0.996	7.55	0.06	126.02	357.53	58.10	58.06	20 37.7	20 37.8
2409217.5	0.995	8.30	0.07	123.83	357.30	49.35	49.31	21 13.6	21 13.7
2409218.5	0.994	9.06	0.09	121.99	357.06	40.59	40.56	21 49.5	21 49.7
2409219.5	0.993	9.82	0.10	120.42	356.83	31.82	31.79	22 25.5	22 25.6
2409220.5	0.992	10.57	0.11	119.07	356.61	23.05	23.02	23 01.5	23 01.6
2409221.5	0.990	11.31	0.13	117.88	356.39	14.27	14.23	23 37.6	23 37.7
2409222.5	0.989	12.05	0.15	116.83	356.18	5.47	5.44	.. ...	.. ...
2409223.5	0.988	12.79	0.17	115.89	355.97	356.67	356.64	0 13.7	0 13.8
2409224.5	0.986	13.51	0.18	115.04	355.77	347.86	347.83	0 49.8	0 49.9
2409225.5	0.985	14.23	0.20	114.28	355.58	339.03	339.00	1 26.0	1 26.1
2409226.5	0.983	14.93	0.22	113.58	355.39	330.20	330.17	2 02.2	2 02.3
2409227.5	0.982	15.63	0.24	112.95	355.21	321.36	321.32	2 38.5	2 38.6
2409228.5	0.980	16.31	0.26	112.36	355.04	312.50	312.47	3 14.8	3 14.9
2409229.5	0.978	16.99	0.28	111.82	354.88	303.63	303.60	3 51.2	3 51.3
2409230.5	0.976	17.65	0.30	111.33	354.72	294.75	294.72	4 27.6	4 27.8
2409231.5	0.975	18.30	0.32	110.86	354.57	285.86	285.82	5 04.1	5 04.2
2409232.5	0.973	18.94	0.34	110.43	354.43	276.95	276.92	5 40.6	5 40.8
2409233.5	0.971	19.56	0.36	110.03	354.30	268.03	268.00	6 17.2	6 17.4
2409234.5	0.969	20.18	0.38	109.66	354.17	259.10	259.07	6 53.9	6 54.0
2409235.5	0.967	20.78	0.40	109.31	354.06	250.16	250.12	7 30.6	7 30.7
2409236.5	0.966	21.36	0.42	108.98	353.95	241.20	241.17	8 07.3	8 07.5
2409237.5	0.964	21.94	0.44	108.68	353.85	232.23	232.20	8 44.2	8 44.3

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2409941.5	6.51	−0.4	11.95	271.06	+22.44	−24.12	+23.00	68.87
2409942.5	6.46	0.4	12.04	270.93	22.41	23.51	23.07	69.31
2409943.5	6.41	0.4	12.14	270.78	22.39	22.90	23.14	69.74
2409944.5	6.36	0.5	12.24	270.61	22.38	22.26	23.21	70.18
2409945.5	6.31	0.5	12.33	270.44	22.36	21.62	23.27	70.62
2409946.5	6.26	−0.5	12.43	270.25	+22.34	−20.96	+23.34	71.05
2409947.5	6.21	0.5	12.52	270.04	22.32	20.28	23.40	71.49
2409948.5	6.17	0.6	12.61	269.82	22.31	19.59	23.47	71.93
2409949.5	6.12	0.6	12.70	269.59	22.29	18.89	23.53	72.36
2409950.5	6.08	0.6	12.79	269.34	22.28	18.17	23.59	72.80
2409951.5	6.04	−0.6	12.87	269.08	+22.26	−17.44	+23.64	73.24
2409952.5	6.00	0.7	12.96	268.81	22.25	16.69	23.70	73.67
2409953.5	5.96	0.7	13.04	268.53	22.24	15.94	23.76	74.11
2409954.5	5.93	0.7	13.12	268.23	22.23	15.17	23.81	74.55
2409955.5	5.89	0.7	13.20	267.92	22.21	14.38	23.86	74.98
2409956.5	5.86	−0.8	13.27	267.60	+22.20	−13.59	+23.92	75.42
2409957.5	5.83	0.8	13.34	267.27	22.19	12.78	23.96	75.86
2409958.5	5.80	0.8	13.41	266.93	22.18	11.97	24.01	76.29
2409959.5	5.77	0.8	13.47	266.58	22.17	11.14	24.06	76.73
2409960.5	5.75	0.9	13.54	266.22	22.16	10.30	24.10	77.17
2409961.5	5.72	−0.9	13.59	265.85	+22.16	− 9.45	+24.15	77.61
2409962.5	5.70	0.9	13.65	265.47	22.15	8.60	24.19	78.04
2409963.5	5.68	0.9	13.70	265.08	22.14	7.73	24.23	78.48
2409964.5	5.66	0.9	13.75	264.69	22.13	6.86	24.27	78.92
2409965.5	5.64	0.9	13.79	264.29	22.13	5.98	24.31	79.35
2409966.5	5.62	−1.0	13.83	263.88	+22.12	− 5.10	+24.35	79.79
2409967.5	5.61	1.0	13.86	263.47	22.11	4.21	24.38	80.23
2409968.5	5.60	1.0	13.89	263.05	22.11	3.31	24.41	80.67
2409969.5	5.59	1.0	13.92	262.63	22.10	2.41	24.45	81.11
2409970.5	5.58	1.0	13.94	262.21	22.09	1.51	24.48	81.54
2409971.5	5.57	−1.0	13.95	261.79	+22.09	− 0.60	+24.51	81.98
2409972.5	5.57	1.0	13.96	261.36	22.08	+ 0.30	24.53	82.42
2409973.5	5.57	1.0	13.97	260.93	22.08	1.21	24.56	82.86
2409974.5	5.57	1.0	13.97	260.51	22.08	2.12	24.58	83.30
2409975.5	5.57	1.0	13.97	260.08	22.07	3.02	24.61	83.74
2409976.5	5.57	−1.0	13.96	259.66	+22.07	+ 3.93	+24.63	84.18
2409977.5	5.57	1.0	13.95	259.24	22.06	4.83	24.65	84.62
2409978.5	5.58	1.0	13.93	258.83	22.06	5.73	24.67	85.06
2409979.5	5.59	1.0	13.91	258.42	22.06	6.62	24.68	85.50
2409980.5	5.60	0.9	13.89	258.01	22.06	7.51	24.70	85.94
2409981.5	5.61	−0.9	13.86	257.61	+22.06	+ 8.40	+24.71	86.37
2409982.5	5.63	0.9	13.82	257.22	22.06	9.27	24.72	86.81
2409983.5	5.64	0.9	13.79	256.84	22.06	10.14	24.73	87.25
2409984.5	5.66	0.9	13.74	256.46	22.06	11.00	24.74	87.69
2409985.5	5.68	0.9	13.70	256.09	22.06	11.86	24.75	88.14
2409986.5	5.70	−0.8	13.65	255.73	+22.07	+12.70	+24.76	88.58
2409987.5	5.72	0.8	13.60	255.38	22.07	13.54	24.76	89.02
2409988.5	5.74	0.8	13.54	255.04	22.08	14.37	24.76	89.46
2409989.5	5.77	0.8	13.48	254.71	22.08	15.18	24.76	89.90
2409990.5	5.80	0.8	13.42	254.39	22.09	15.99	24.76	90.34
2409991.5	5.82	−0.7	13.35	254.08	+22.10	+16.78	+24.76	90.79
2409992.5	5.86	0.7	13.28	253.79	22.11	17.57	24.76	91.23
2409993.5	5.89	0.7	13.21	253.50	22.12	18.34	24.75	91.67
2409994.5	5.92	0.7	13.14	253.23	22.13	19.10	24.75	92.11
2409995.5	5.95	0.7	13.07	252.97	22.15	19.84	24.74	92.56
2409996.5	5.99	−0.6	12.99	252.73	+22.16	+20.58	+24.73	93.00
2409997.5	6.02	0.6	12.91	252.50	22.18	21.30	24.72	93.44
2409998.5	6.06	0.6	12.83	252.28	22.20	22.00	24.70	93.89
2409999.5	6.10	0.6	12.74	252.07	22.22	22.70	24.69	94.33
2410000.5	6.14	0.6	12.66	251.88	22.24	23.38	24.67	94.78
2410001.5	6.18	−0.5	12.58	251.70	+22.26	+24.04	+24.65	95.22

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2409941.5	0.963	22.22	0.44	288.85	25.00	246.74	246.71	7 44.6	7 44.7
2409942.5	0.965	21.67	0.43	288.63	24.94	237.78	237.75	8 21.3	8 21.5
2409943.5	0.966	21.10	0.41	288.39	24.87	228.83	228.80	8 58.0	8 58.2
2409944.5	0.968	20.52	0.39	288.14	24.79	219.90	219.87	9 34.6	9 34.8
2409945.5	0.970	19.92	0.37	287.87	24.71	210.98	210.95	10 11.2	10 11.3
2409946.5	0.972	19.32	0.35	287.58	24.62	202.08	202.04	10 47.7	10 47.8
2409947.5	0.974	18.70	0.33	287.27	24.53	193.18	193.15	11 24.1	11 24.3
2409948.5	0.975	18.07	0.31	286.94	24.42	184.31	184.27	12 00.5	12 00.6
2409949.5	0.977	17.42	0.29	286.58	24.32	175.44	175.41	12 36.8	12 37.0
2409950.5	0.979	16.77	0.27	286.19	24.20	166.59	166.56	13 13.1	13 13.2
2409951.5	0.980	16.10	0.25	285.77	24.08	157.75	157.72	13 49.3	13 49.5
2409952.5	0.982	15.42	0.23	285.31	23.95	148.92	148.89	14 25.5	14 25.6
2409953.5	0.984	14.73	0.21	284.80	23.81	140.11	140.08	15 01.6	15 01.7
2409954.5	0.985	14.03	0.20	284.24	23.67	131.31	131.27	15 37.7	15 37.8
2409955.5	0.987	13.33	0.18	283.62	23.52	122.51	122.48	16 13.7	16 13.8
2409956.5	0.988	12.61	0.16	282.93	23.37	113.73	113.70	16 49.7	16 49.8
2409957.5	0.989	11.88	0.14	282.15	23.21	104.96	104.93	17 25.6	17 25.7
2409958.5	0.991	11.15	0.13	281.27	23.05	96.21	96.17	18 01.5	18 01.6
2409959.5	0.992	10.41	0.11	280.27	22.87	87.46	87.42	18 37.3	18 37.4
2409960.5	0.993	9.66	0.10	279.11	22.70	78.72	78.68	19 13.1	19 13.2
2409961.5	0.994	8.91	0.08	277.75	22.51	69.98	69.95	19 48.9	19 49.0
2409962.5	0.995	8.16	0.07	276.15	22.33	61.26	61.23	20 24.6	20 24.7
2409963.5	0.996	7.40	0.06	274.22	22.13	52.54	52.51	21 00.3	21 00.4
2409964.5	0.997	6.65	0.05	271.85	21.94	43.83	43.80	21 36.0	21 36.1
2409965.5	0.997	5.91	0.04	268.89	21.74	35.13	35.10	22 11.6	22 11.8
2409966.5	0.998	5.18	0.03	265.08	21.53	26.43	26.40	22 47.3	22 47.4
2409967.5	0.998	4.48	0.02	260.05	21.32	17.74	17.71	23 22.9	23 23.0
2409968.5	0.999	3.81	0.02	253.22	21.11	9.05	9.02	23 58.5	23 58.6
2409969.5	0.999	3.22	0.01	243.71	20.90	0.37	0.33	.. .. ..	.. .. ..
2409970.5	0.999	2.75	0.01	230.48	20.68	351.68	351.65	0 34.1	0 34.2
2409971.5	1.000	2.48	0.01	213.14	20.46	343.00	342.97	1 09.7	1 09.8
2409972.5	1.000	2.47	0.01	193.69	20.24	334.32	334.29	1 45.3	1 45.4
2409973.5	0.999	2.72	0.01	176.00	20.02	325.64	325.61	2 20.8	2 21.0
2409974.5	0.999	3.18	0.01	162.35	19.80	316.96	316.92	2 56.4	2 56.6
2409975.5	0.999	3.76	0.02	152.50	19.57	308.27	308.24	3 32.0	3 32.2
2409976.5	0.999	4.43	0.02	145.44	19.35	299.59	299.55	4 07.6	4 07.8
2409977.5	0.998	5.14	0.03	140.25	19.13	290.90	290.86	4 43.3	4 43.4
2409978.5	0.997	5.87	0.04	136.34	18.91	282.20	282.17	5 18.9	5 19.0
2409979.5	0.997	6.62	0.05	133.29	18.69	273.50	273.47	5 54.6	5 54.7
2409980.5	0.996	7.39	0.06	130.86	18.47	264.80	264.76	6 30.3	6 30.4
2409981.5	0.995	8.15	0.07	128.87	18.26	256.08	256.05	7 06.0	7 06.1
2409982.5	0.994	8.92	0.08	127.23	18.05	247.37	247.33	7 41.7	7 41.9
2409983.5	0.993	9.69	0.10	125.83	17.84	238.64	238.61	8 17.5	8 17.6
2409984.5	0.992	10.45	0.11	124.64	17.63	229.91	229.87	8 53.3	8 53.5
2409985.5	0.990	11.21	0.13	123.60	17.43	221.16	221.13	9 29.2	9 29.3
2409986.5	0.989	11.96	0.15	122.69	17.23	212.41	212.38	10 05.1	10 05.2
2409987.5	0.988	12.71	0.17	121.89	17.04	203.65	203.61	10 41.0	10 41.2
2409988.5	0.986	13.45	0.19	121.17	16.85	194.87	194.84	11 17.0	11 17.2
2409989.5	0.985	14.18	0.21	120.52	16.67	186.09	186.06	11 53.1	11 53.2
2409990.5	0.983	14.91	0.23	119.94	16.49	177.29	177.26	12 29.2	12 29.3
2409991.5	0.982	15.62	0.25	119.41	16.32	168.48	168.45	13 05.3	13 05.4
2409992.5	0.980	16.33	0.27	118.92	16.15	159.66	159.63	13 41.5	13 41.6
2409993.5	0.978	17.02	0.29	118.48	15.99	150.83	150.80	14 17.7	14 17.9
2409994.5	0.976	17.70	0.31	118.07	15.84	141.99	141.96	14 54.0	14 54.2
2409995.5	0.975	18.38	0.33	117.69	15.69	133.13	133.10	15 30.4	15 30.5
2409996.5	0.973	19.04	0.36	117.34	15.56	124.26	124.23	16 06.8	16 07.0
2409997.5	0.971	19.69	0.38	117.01	15.42	115.37	115.34	16 43.3	16 43.4
2409998.5	0.969	20.32	0.40	116.70	15.30	106.48	106.44	17 19.8	17 20.0
2409999.5	0.967	20.95	0.42	116.42	15.18	97.56	97.53	17 56.4	17 56.6
2410000.5	0.965	21.56	0.44	116.15	15.07	88.64	88.60	18 33.1	18 33.2
2410001.5	0.963	22.16	0.46	115.91	14.97	79.70	79.66	19 09.8	19 09.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2410708.5	6.11	-0.6	12.73	308.19	+17.76	-22.61	+23.96	104.21
2410709.5	6.05	0.6	12.85	308.09	17.79	22.02	23.91	104.66
2410710.5	6.00	0.6	12.96	307.98	17.83	21.41	23.85	105.11
2410711.5	5.95	0.7	13.08	307.85	17.87	20.79	23.80	105.57
2410712.5	5.90	0.7	13.19	307.71	17.91	20.16	23.74	106.02
2410713.5	5.84	-0.7	13.31	307.55	+17.96	-19.51	+23.68	106.47
2410714.5	5.80	0.7	13.42	307.39	18.01	18.86	23.62	106.93
2410715.5	5.75	0.8	13.53	307.21	18.07	18.19	23.56	107.38
2410716.5	5.70	0.8	13.64	307.02	18.13	17.50	23.50	107.84
2410717.5	5.66	0.8	13.75	306.81	18.19	16.81	23.43	108.29
2410718.5	5.61	-0.9	13.86	306.60	+18.26	-16.10	+23.37	108.75
2410719.5	5.57	0.9	13.96	306.37	18.34	15.38	23.30	109.20
2410720.5	5.53	0.9	14.07	306.13	18.41	14.65	23.23	109.66
2410721.5	5.49	0.9	14.17	305.88	18.50	13.91	23.16	110.12
2410722.5	5.45	1.0	14.27	305.61	18.58	13.15	23.09	110.58
2410723.5	5.42	-1.0	14.36	305.34	+18.67	-12.39	+23.01	111.03
2410724.5	5.38	1.0	14.45	305.06	18.76	11.61	22.94	111.49
2410725.5	5.35	1.0	14.54	304.76	18.86	10.82	22.86	111.95
2410726.5	5.32	1.1	14.63	304.46	18.95	10.03	22.78	112.41
2410727.5	5.28	1.1	14.72	304.14	19.05	9.22	22.70	112.87
2410728.5	5.26	-1.1	14.80	303.82	+19.16	- 8.41	+22.62	113.33
2410729.5	5.23	1.1	14.87	303.49	19.27	7.59	22.54	113.79
2410730.5	5.20	1.2	14.95	303.15	19.38	6.75	22.45	114.26
2410731.5	5.18	1.2	15.01	302.80	19.49	5.91	22.36	114.72
2410732.5	5.16	1.2	15.08	302.44	19.60	5.07	22.28	115.18
2410733.5	5.14	-1.2	15.14	302.08	+19.72	- 4.21	+22.19	115.64
2410734.5	5.12	1.2	15.19	301.71	19.83	3.36	22.09	116.11
2410735.5	5.10	1.3	15.24	301.34	19.95	2.49	22.00	116.57
2410736.5	5.09	1.3	15.29	300.96	20.07	1.62	21.91	117.04
2410737.5	5.07	1.3	15.33	300.58	20.19	- 0.75	21.81	117.50
2410738.5	5.06	-1.3	15.37	300.20	+20.31	+ 0.12	+21.71	117.97
2410739.5	5.05	1.3	15.40	299.81	20.44	1.00	21.61	118.44
2410740.5	5.04	1.3	15.42	299.42	20.56	1.88	21.51	118.90
2410741.5	5.04	1.3	15.44	299.04	20.68	2.76	21.41	119.37
2410742.5	5.03	1.3	15.46	298.65	20.80	3.63	21.30	119.84
2410743.5	5.03	-1.3	15.47	298.26	+20.93	+ 4.51	+21.20	120.31
2410744.5	5.03	1.3	15.47	297.88	21.05	5.39	21.09	120.78
2410745.5	5.03	1.3	15.47	297.49	21.17	6.26	20.98	121.25
2410746.5	5.03	1.3	15.46	297.11	21.29	7.13	20.87	121.72
2410747.5	5.03	1.3	15.45	296.74	21.41	8.00	20.76	122.19
2410748.5	5.04	-1.2	15.44	296.37	+21.52	+ 8.86	+20.65	122.66
2410749.5	5.05	1.2	15.42	296.00	21.64	9.71	20.53	123.14
2410750.5	5.05	1.2	15.39	295.64	21.75	10.56	20.42	123.61
2410751.5	5.06	1.2	15.36	295.29	21.86	11.40	20.30	124.08
2410752.5	5.07	1.2	15.33	294.95	21.97	12.23	20.18	124.56
2410753.5	5.09	-1.2	15.29	294.61	+22.08	+13.06	+20.06	125.03
2410754.5	5.10	1.1	15.24	294.28	22.19	13.87	19.94	125.51
2410755.5	5.12	1.1	15.20	293.96	22.29	14.68	19.81	125.98
2410756.5	5.14	1.1	15.14	293.66	22.39	15.48	19.69	126.46
2410757.5	5.15	1.1	15.09	293.36	22.49	16.27	19.56	126.94
2410758.5	5.17	-1.1	15.03	293.07	+22.59	+17.04	+19.43	127.42
2410759.5	5.20	1.1	14.97	292.79	22.69	17.81	19.30	127.90
2410760.5	5.22	1.0	14.90	292.53	22.78	18.56	19.17	128.37
2410761.5	5.24	1.0	14.83	292.28	22.87	19.30	19.04	128.85
2410762.5	5.27	1.0	14.76	292.03	22.95	20.03	18.90	129.34
2410763.5	5.30	-1.0	14.69	291.81	+23.04	+20.75	+18.77	129.82
2410764.5	5.32	1.0	14.61	291.59	23.12	21.45	18.63	130.30
2410765.5	5.35	0.9	14.53	291.39	23.20	22.14	18.49	130.78
2410766.5	5.38	0.9	14.45	291.20	23.27	22.82	18.35	131.27
2410767.5	5.41	0.9	14.37	291.03	23.35	23.48	18.21	131.75
2410768.5	5.45	-0.9	14.28	290.87	+23.42	+24.13	+18.07	132.23

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2410708.5	0.964	21.99	0.46	287.00	37.22	63.84	63.81	20 15.0	20 15.1
2410709.5	0.965	21.44	0.44	286.89	37.21	54.85	54.82	20 51.8	20 52.0
2410710.5	0.967	20.87	0.43	286.77	37.19	45.87	45.84	21 28.6	21 28.7
2410711.5	0.969	20.29	0.41	286.64	37.17	36.90	36.87	22 05.4	22 05.5
2410712.5	0.971	19.70	0.39	286.50	37.14	27.95	27.92	22 42.0	22 42.2
2410713.5	0.972	19.09	0.37	286.36	37.12	19.01	18.97	23 18.7	23 18.8
2410714.5	0.974	18.48	0.35	286.20	37.09	10.08	10.05	23 55.3	23 55.4
2410715.5	0.976	17.85	0.33	286.04	37.06	1.16	1.13	.. .. .	.. .. .
2410716.5	0.978	17.20	0.31	285.86	37.03	352.25	352.22	0 31.8	0 31.9
2410717.5	0.979	16.55	0.28	285.67	37.00	343.36	343.33	1 08.2	1 08.4
2410718.5	0.981	15.88	0.26	285.46	36.96	334.48	334.45	1 44.7	1 44.8
2410719.5	0.983	15.20	0.24	285.23	36.92	325.61	325.58	2 21.0	2 21.2
2410720.5	0.984	14.50	0.22	284.98	36.88	316.75	316.72	2 57.4	2 57.5
2410721.5	0.986	13.80	0.20	284.69	36.83	307.90	307.87	3 33.6	3 33.8
2410722.5	0.987	13.08	0.19	284.38	36.78	299.07	299.04	4 09.9	4 10.0
2410723.5	0.988	12.36	0.17	284.02	36.73	290.24	290.21	4 46.0	4 46.2
2410724.5	0.990	11.62	0.15	283.61	36.68	281.43	281.40	5 22.2	5 22.3
2410725.5	0.991	10.87	0.13	283.15	36.62	272.62	272.59	5 58.3	5 58.4
2410726.5	0.992	10.12	0.11	282.60	36.56	263.83	263.80	6 34.3	6 34.4
2410727.5	0.993	9.35	0.10	281.96	36.50	255.04	255.01	7 10.3	7 10.5
2410728.5	0.994	8.58	0.08	281.20	36.44	246.26	246.23	7 46.3	7 46.4
2410729.5	0.995	7.80	0.07	280.27	36.37	237.49	237.46	8 22.3	8 22.4
2410730.5	0.996	7.01	0.06	279.12	36.30	228.73	228.70	8 58.2	8 58.3
2410731.5	0.997	6.23	0.04	277.67	36.23	219.98	219.95	9 34.0	9 34.2
2410732.5	0.998	5.43	0.03	275.78	36.15	211.23	211.20	10 09.9	10 10.0
2410733.5	0.998	4.64	0.02	273.22	36.07	202.49	202.46	10 45.7	10 45.8
2410734.5	0.999	3.86	0.02	269.58	35.99	193.75	193.72	11 21.5	11 21.6
2410735.5	0.999	3.10	0.01	264.08	35.90	185.02	184.99	11 57.3	11 57.4
2410736.5	1.000	2.38	0.01	255.08	35.82	176.30	176.27	12 33.1	12 33.2
2410737.5	1.000	1.76	0.00	239.01	35.73	167.57	167.54	13 08.8	13 09.0
2410738.5	1.000	1.40	0.00	210.89	35.64	158.85	158.82	13 44.6	13 44.7
2410739.5	1.000	1.50	0.00	177.23	35.54	150.13	150.10	14 20.3	14 20.4
2410740.5	1.000	2.00	0.00	154.27	35.45	141.41	141.38	14 56.0	14 56.2
2410741.5	0.999	2.68	0.01	141.62	35.35	132.69	132.66	15 31.8	15 31.9
2410742.5	0.999	3.43	0.01	134.30	35.25	123.97	123.94	16 07.5	16 07.7
2410743.5	0.999	4.22	0.02	129.68	35.15	115.25	115.22	16 43.3	16 43.4
2410744.5	0.998	5.03	0.03	126.53	35.05	106.53	106.50	17 19.1	17 19.2
2410745.5	0.997	5.85	0.04	124.27	34.95	97.81	97.78	17 54.8	17 55.0
2410746.5	0.997	6.67	0.05	122.58	34.85	89.08	89.05	18 30.6	18 30.8
2410747.5	0.996	7.49	0.07	121.26	34.75	80.34	80.31	19 06.5	19 06.6
2410748.5	0.995	8.31	0.08	120.21	34.64	71.61	71.58	19 42.3	19 42.4
2410749.5	0.994	9.13	0.10	119.36	34.54	62.86	62.83	20 18.2	20 18.3
2410750.5	0.992	9.94	0.12	118.65	34.44	54.11	54.08	20 54.1	20 54.2
2410751.5	0.991	10.75	0.13	118.06	34.34	45.35	45.32	21 30.0	21 30.1
2410752.5	0.990	11.55	0.16	117.55	34.24	36.59	36.55	22 06.0	22 06.1
2410753.5	0.988	12.35	0.18	117.11	34.14	27.81	27.78	22 42.0	22 42.1
2410754.5	0.987	13.14	0.20	116.73	34.05	19.03	19.00	23 18.0	23 18.2
2410755.5	0.985	13.92	0.22	116.40	33.95	10.23	10.20	23 54.1	23 54.3
2410756.5	0.984	14.69	0.25	116.10	33.86	1.43	1.40	.. .. .	.. .. .
2410757.5	0.982	15.46	0.27	115.84	33.77	352.61	352.58	0 30.3	0 30.4
2410758.5	0.980	16.21	0.30	115.61	33.68	343.79	343.76	1 06.5	1 06.6
2410759.5	0.978	16.96	0.33	115.40	33.59	334.95	334.92	1 42.7	1 42.8
2410760.5	0.976	17.69	0.35	115.21	33.51	326.10	326.07	2 19.0	2 19.1
2410761.5	0.974	18.42	0.38	115.03	33.43	317.24	317.21	2 55.3	2 55.5
2410762.5	0.972	19.13	0.41	114.88	33.36	308.37	308.34	3 31.7	3 31.9
2410763.5	0.970	19.83	0.44	114.73	33.28	299.48	299.45	4 08.2	4 08.3
2410764.5	0.968	20.52	0.46	114.60	33.21	290.58	290.55	4 44.7	4 44.8
2410765.5	0.966	21.20	0.49	114.48	33.15	281.67	281.64	5 21.3	5 21.4
2410766.5	0.964	21.86	0.52	114.37	33.09	272.74	272.71	5 57.9	5 58.0
2410767.5	0.962	22.52	0.55	114.26	33.03	263.80	263.77	6 34.6	6 34.7
2410768.5	0.960	23.16	0.58	114.17	32.98	254.84	254.81	7 11.4	7 11.5

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2411485.5	5.05	-1.1	15.40	350.11	+ 3.89	-20.49	+13.13	147.15
2411486.5	5.00	1.1	15.55	350.07	3.95	19.96	12.95	147.66
2411487.5	4.95	1.2	15.71	350.02	4.03	19.43	12.76	148.17
2411488.5	4.90	1.2	15.86	349.96	4.11	18.88	12.58	148.68
2411489.5	4.86	1.2	16.01	349.89	4.19	18.32	12.39	149.19
2411490.5	4.81	-1.3	16.17	349.81	+ 4.28	-17.75	+12.20	149.70
2411491.5	4.77	1.3	16.32	349.71	4.38	17.17	12.01	150.22
2411492.5	4.72	1.3	16.47	349.61	4.49	16.58	11.82	150.73
2411493.5	4.68	1.4	16.62	349.50	4.60	15.98	11.62	151.25
2411494.5	4.64	1.4	16.77	349.37	4.71	15.37	11.43	151.76
2411495.5	4.60	-1.4	16.91	349.23	+ 4.84	-14.74	+11.24	152.28
2411496.5	4.56	1.5	17.06	349.09	4.97	14.11	11.04	152.80
2411497.5	4.52	1.5	17.20	348.93	5.10	13.46	10.84	153.31
2411498.5	4.49	1.5	17.34	348.76	5.24	12.81	10.64	153.83
2411499.5	4.45	1.5	17.47	348.58	5.38	12.14	10.45	154.35
2411500.5	4.42	-1.6	17.61	348.40	+ 5.54	-11.46	+10.24	154.87
2411501.5	4.38	1.6	17.74	348.20	5.69	10.78	10.04	155.40
2411502.5	4.35	1.6	17.87	347.99	5.85	10.08	9.84	155.92
2411503.5	4.32	1.7	17.99	347.77	6.02	9.37	9.64	156.44
2411504.5	4.30	1.7	18.11	347.55	6.19	8.66	9.43	156.97
2411505.5	4.27	-1.7	18.22	347.32	+ 6.36	- 7.94	+ 9.23	157.49
2411506.5	4.24	1.7	18.33	347.08	6.54	7.20	9.02	158.02
2411507.5	4.22	1.8	18.44	346.83	6.72	6.47	8.81	158.55
2411508.5	4.20	1.8	18.54	346.57	6.90	5.72	8.60	159.08
2411509.5	4.17	1.8	18.63	346.31	7.09	4.97	8.39	159.61
2411510.5	4.15	-1.8	18.72	346.05	+ 7.28	- 4.21	+ 8.18	160.14
2411511.5	4.14	1.9	18.80	345.77	7.47	3.44	7.97	160.67
2411512.5	4.12	1.9	18.88	345.50	7.66	2.68	7.76	161.20
2411513.5	4.10	1.9	18.95	345.22	7.86	1.90	7.55	161.73
2411514.5	4.09	1.9	19.01	344.93	8.05	1.13	7.33	162.26
2411515.5	4.08	-1.9	19.07	344.65	+ 8.25	- 0.35	+ 7.12	162.80
2411516.5	4.07	1.9	19.12	344.36	8.44	+ 0.44	6.90	163.34
2411517.5	4.06	1.9	19.17	344.07	8.64	1.22	6.68	163.87
2411518.5	4.05	1.9	19.21	343.78	8.83	2.00	6.46	164.41
2411519.5	4.04	1.9	19.24	343.49	9.03	2.79	6.24	164.95
2411520.5	4.04	-1.9	19.26	343.20	+ 9.22	+ 3.58	+ 6.02	165.49
2411521.5	4.03	1.9	19.28	342.91	9.41	4.36	5.80	166.03
2411522.5	4.03	1.9	19.30	342.62	9.60	5.14	5.58	166.57
2411523.5	4.03	1.9	19.30	342.34	9.79	5.92	5.36	167.11
2411524.5	4.03	1.9	19.30	342.06	9.97	6.70	5.14	167.65
2411525.5	4.03	-1.9	19.29	341.78	+10.15	+ 7.48	+ 4.91	168.20
2411526.5	4.03	1.9	19.28	341.51	10.33	8.25	4.69	168.74
2411527.5	4.04	1.8	19.26	341.24	10.51	9.02	4.46	169.29
2411528.5	4.04	1.8	19.23	340.98	10.67	9.78	4.24	169.84
2411529.5	4.05	1.8	19.20	340.72	10.84	10.54	4.01	170.39
2411530.5	4.06	-1.8	19.16	340.47	+11.00	+11.29	+ 3.78	170.93
2411531.5	4.07	1.8	19.11	340.23	11.16	12.03	3.56	171.48
2411532.5	4.08	1.8	19.06	339.99	11.31	12.77	3.33	172.03
2411533.5	4.09	1.7	19.01	339.77	11.45	13.50	3.10	172.59
2411534.5	4.11	1.7	18.95	339.55	11.59	14.22	2.87	173.14
2411535.5	4.12	-1.7	18.88	339.34	+11.73	+14.93	+ 2.64	173.69
2411536.5	4.13	1.7	18.81	339.14	11.85	15.63	2.41	174.25
2411537.5	4.15	1.7	18.73	338.96	11.98	16.32	2.17	174.80
2411538.5	4.17	1.7	18.65	338.78	12.09	17.00	1.94	175.36
2411539.5	4.19	1.6	18.57	338.61	12.20	17.68	1.71	175.92
2411540.5	4.21	-1.6	18.48	338.46	+12.30	+18.34	+ 1.48	176.47
2411541.5	4.23	1.6	18.39	338.32	12.40	18.99	1.24	177.03
2411542.5	4.25	1.6	18.30	338.19	12.48	19.63	1.01	177.59
2411543.5	4.27	1.6	18.20	338.07	12.57	20.26	0.77	178.16
2411544.5	4.30	1.5	18.10	337.96	12.64	20.88	0.54	178.72
2411545.5	4.32	-1.5	18.00	337.87	+12.71	+21.48	+ 0.30	179.28

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2411485.5	0.963	22.25	0.57	277.44	33.25	145.24	145.21	14 41.2	14 41.3
2411486.5	0.965	21.68	0.55	277.54	33.28	136.18	136.15	15 18.4	15 18.5
2411487.5	0.966	21.09	0.53	277.66	33.31	127.13	127.10	15 55.4	15 55.6
2411488.5	0.968	20.49	0.50	277.79	33.35	118.10	118.07	16 32.5	16 32.6
2411489.5	0.970	19.88	0.48	277.93	33.38	109.07	109.04	17 09.5	17 09.6
2411490.5	0.972	19.26	0.45	278.08	33.43	100.06	100.03	17 46.4	17 46.6
2411491.5	0.974	18.62	0.43	278.25	33.48	91.05	91.02	18 23.3	18 23.5
2411492.5	0.976	17.97	0.40	278.44	33.53	82.06	82.03	19 00.2	19 00.3
2411493.5	0.977	17.30	0.38	278.65	33.59	73.08	73.05	19 37.0	19 37.2
2411494.5	0.979	16.62	0.35	278.88	33.65	64.10	64.07	20 13.8	20 13.9
2411495.5	0.981	15.93	0.32	279.13	33.71	55.14	55.11	20 50.5	20 50.7
2411496.5	0.982	15.23	0.30	279.40	33.78	46.19	46.16	21 27.2	21 27.3
2411497.5	0.984	14.51	0.27	279.71	33.85	37.25	37.22	22 03.8	22 04.0
2411498.5	0.986	13.78	0.25	280.05	33.93	28.32	28.29	22 40.4	22 40.6
2411499.5	0.987	13.04	0.23	280.42	34.01	19.40	19.36	23 17.0	23 17.1
2411500.5	0.989	12.29	0.20	280.84	34.09	10.48	10.45	23 53.5	23 53.6
2411501.5	0.990	11.52	0.18	281.31	34.18	1.58	1.55	.. .. .	.. .. .
2411502.5	0.991	10.75	0.16	281.85	34.27	352.69	352.66	0 30.0	0 30.1
2411503.5	0.992	9.97	0.14	282.46	34.36	343.80	343.77	1 06.4	1 06.6
2411504.5	0.994	9.17	0.12	283.17	34.46	334.93	334.90	1 42.8	1 43.0
2411505.5	0.995	8.37	0.10	284.00	34.55	326.06	326.03	2 19.2	2 19.3
2411506.5	0.996	7.56	0.08	284.99	34.65	317.20	317.17	2 55.5	2 55.7
2411507.5	0.997	6.74	0.06	286.22	34.76	308.34	308.31	3 31.8	3 32.0
2411508.5	0.997	5.92	0.05	287.75	34.86	299.50	299.46	4 08.1	4 08.2
2411509.5	0.998	5.09	0.04	289.76	34.96	290.65	290.62	4 44.4	4 44.5
2411510.5	0.999	4.27	0.03	292.52	35.07	281.82	281.79	5 20.6	5 20.7
2411511.5	0.999	3.45	0.02	296.54	35.17	272.99	272.95	5 56.8	5 56.9
2411512.5	0.999	2.65	0.01	302.98	35.28	264.16	264.13	6 33.0	6 33.1
2411513.5	1.000	1.91	0.01	314.58	35.39	255.34	255.30	7 09.2	7 09.3
2411514.5	1.000	1.33	0.00	338.25	35.49	246.51	246.48	7 45.3	7 45.5
2411515.5	1.000	1.18	0.00	18.74	35.60	237.70	237.66	8 21.5	8 21.6
2411516.5	1.000	1.60	0.00	51.40	35.71	228.88	228.85	8 57.7	8 57.8
2411517.5	1.000	2.30	0.01	67.63	35.81	220.06	220.03	9 33.8	9 33.9
2411518.5	0.999	3.09	0.01	76.04	35.92	211.25	211.22	10 10.0	10 10.1
2411519.5	0.999	3.92	0.02	81.04	36.02	202.43	202.40	10 46.1	10 46.2
2411520.5	0.998	4.77	0.03	84.34	36.12	193.61	193.58	11 22.3	11 22.4
2411521.5	0.998	5.63	0.05	86.68	36.22	184.79	184.76	11 58.4	11 58.6
2411522.5	0.997	6.49	0.06	88.44	36.31	175.97	175.94	12 34.6	12 34.7
2411523.5	0.996	7.35	0.08	89.82	36.41	167.15	167.12	13 10.8	13 10.9
2411524.5	0.995	8.22	0.10	90.95	36.50	158.32	158.29	13 47.0	13 47.1
2411525.5	0.994	9.08	0.12	91.89	36.59	149.49	149.46	14 23.2	14 23.3
2411526.5	0.993	9.93	0.14	92.69	36.68	140.66	140.63	14 59.5	14 59.6
2411527.5	0.991	10.79	0.17	93.38	36.76	131.82	131.78	15 35.7	15 35.9
2411528.5	0.990	11.63	0.20	93.99	36.85	122.97	122.94	16 12.0	16 12.2
2411529.5	0.988	12.48	0.23	94.53	36.93	114.12	114.08	16 48.4	16 48.5
2411530.5	0.987	13.31	0.26	95.02	37.00	105.26	105.22	17 24.7	17 24.8
2411531.5	0.985	14.14	0.29	95.47	37.07	96.39	96.36	18 01.1	18 01.2
2411532.5	0.983	14.96	0.32	95.88	37.14	87.51	87.48	18 37.5	18 37.7
2411533.5	0.981	15.77	0.36	96.25	37.21	78.63	78.60	19 14.0	19 14.1
2411534.5	0.979	16.57	0.39	96.59	37.27	69.73	69.70	19 50.5	19 50.6
2411535.5	0.977	17.36	0.43	96.91	37.33	60.83	60.80	20 27.1	20 27.2
2411536.5	0.975	18.14	0.47	97.21	37.39	51.92	51.88	21 03.7	21 03.8
2411537.5	0.973	18.91	0.51	97.49	37.44	42.99	42.96	21 40.3	21 40.4
2411538.5	0.971	19.67	0.54	97.75	37.49	34.06	34.02	22 17.0	22 17.1
2411539.5	0.969	20.42	0.58	97.99	37.54	25.11	25.08	22 53.8	22 53.9
2411540.5	0.966	21.16	0.62	98.22	37.58	16.15	16.12	23 30.5	23 30.7
2411541.5	0.964	21.88	0.66	98.43	37.62	7.18	7.15	.. .. .	.. .. .
2411542.5	0.962	22.59	0.70	98.63	37.66	358.20	358.17	0 07.4	0 07.5
2411543.5	0.959	23.29	0.74	98.82	37.69	349.20	349.17	0 44.3	0 44.4
2411544.5	0.957	23.98	0.78	99.00	37.72	340.20	340.16	1 21.3	1 21.4
2411545.5	0.954	24.65	0.82	99.16	37.75	331.18	331.14	1 58.3	1 58.4

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2412284.5	3.73	-1.9	20.86	51.77	-16.37	-24.27	-12.02	209.83
2412285.5	3.69	2.0	21.06	51.79	16.30	23.71	12.25	210.44
2412286.5	3.66	2.0	21.25	51.79	16.23	23.13	12.48	211.05
2412287.5	3.63	2.0	21.43	51.78	16.16	22.54	12.70	211.66
2412288.5	3.60	2.1	21.62	51.76	16.08	21.93	12.92	212.27
2412289.5	3.57	-2.1	21.81	51.72	-16.00	-21.31	-13.14	212.88
2412290.5	3.54	2.1	21.99	51.67	15.91	20.67	13.36	213.49
2412291.5	3.51	2.1	22.17	51.61	15.83	20.02	13.58	214.11
2412292.5	3.48	2.2	22.34	51.54	15.74	19.36	13.80	214.72
2412293.5	3.45	2.2	22.52	51.45	15.65	18.68	14.02	215.33
2412294.5	3.43	-2.2	22.69	51.35	-15.56	-17.99	-14.24	215.95
2412295.5	3.40	2.3	22.85	51.24	15.46	17.28	14.45	216.57
2412296.5	3.38	2.3	23.01	51.12	15.37	16.56	14.66	217.18
2412297.5	3.36	2.3	23.17	50.99	15.27	15.83	14.88	217.80
2412298.5	3.34	2.3	23.32	50.84	15.17	15.08	15.09	218.42
2412299.5	3.31	-2.4	23.46	50.68	-15.07	-14.32	-15.30	219.04
2412300.5	3.29	2.4	23.60	50.51	14.97	13.55	15.50	219.66
2412301.5	3.28	2.4	23.74	50.34	14.87	12.76	15.71	220.28
2412302.5	3.26	2.4	23.86	50.15	14.77	11.97	15.92	220.90
2412303.5	3.24	2.5	23.98	49.95	14.67	11.16	16.12	221.52
2412304.5	3.23	-2.5	24.10	49.75	-14.56	-10.34	-16.32	222.14
2412305.5	3.21	2.5	24.20	49.53	14.46	9.51	16.52	222.76
2412306.5	3.20	2.5	24.30	49.31	14.36	8.68	16.72	223.38
2412307.5	3.19	2.5	24.39	49.08	14.26	7.83	16.92	224.01
2412308.5	3.18	2.6	24.47	48.85	14.16	6.98	17.11	224.63
2412309.5	3.17	-2.6	24.54	48.61	-14.06	- 6.12	-17.31	225.25
2412310.5	3.16	2.6	24.61	48.37	13.96	5.25	17.50	225.88
2412311.5	3.15	2.6	24.66	48.12	13.87	4.38	17.69	226.50
2412312.5	3.15	2.6	24.71	47.87	13.77	3.50	17.88	227.13
2412313.5	3.14	2.6	24.75	47.61	13.68	2.62	18.06	227.76
2412314.5	3.14	-2.6	24.77	47.36	-13.59	- 1.73	-18.25	228.38
2412315.5	3.14	2.6	24.79	47.10	13.50	- 0.84	18.43	229.01
2412316.5	3.14	2.6	24.80	46.84	13.42	+ 0.05	18.61	229.64
2412317.5	3.14	2.6	24.80	46.58	13.34	0.94	18.79	230.26
2412318.5	3.14	2.6	24.80	46.33	13.26	1.84	18.97	230.89
2412319.5	3.14	-2.6	24.78	46.07	-13.18	+ 2.73	-19.14	231.52
2412320.5	3.14	2.6	24.75	45.82	13.11	3.62	19.31	232.15
2412321.5	3.15	2.6	24.72	45.57	13.05	4.52	19.48	232.78
2412322.5	3.15	2.6	24.67	45.32	12.98	5.41	19.65	233.41
2412323.5	3.16	2.6	24.62	45.08	12.92	6.29	19.82	234.04
2412324.5	3.17	-2.5	24.56	44.84	-12.87	+ 7.18	-19.98	234.67
2412325.5	3.18	2.5	24.49	44.61	12.82	8.06	20.14	235.30
2412326.5	3.19	2.5	24.41	44.39	12.77	8.94	20.30	235.93
2412327.5	3.20	2.5	24.32	44.17	12.73	9.81	20.46	236.56
2412328.5	3.21	2.5	24.23	43.96	12.70	10.67	20.61	237.19
2412329.5	3.22	-2.4	24.13	43.75	-12.67	+11.53	-20.77	237.83
2412330.5	3.24	2.4	24.02	43.56	12.64	12.39	20.92	238.46
2412331.5	3.25	2.4	23.91	43.37	12.62	13.23	21.06	239.09
2412332.5	3.27	2.4	23.79	43.19	12.61	14.07	21.21	239.72
2412333.5	3.29	2.4	23.66	43.03	12.60	14.90	21.35	240.36
2412334.5	3.31	-2.3	23.52	42.87	-12.60	+15.72	-21.49	240.99
2412335.5	3.33	2.3	23.39	42.73	12.60	16.53	21.63	241.62
2412336.5	3.35	2.3	23.24	42.59	12.61	17.33	21.76	242.26
2412337.5	3.37	2.3	23.09	42.47	12.62	18.12	21.89	242.89
2412338.5	3.39	2.2	22.94	42.36	12.64	18.90	22.02	243.52
2412339.5	3.41	-2.2	22.78	42.26	-12.66	+19.67	-22.15	244.16
2412340.5	3.44	2.2	22.62	42.17	12.70	20.42	22.27	244.79
2412341.5	3.46	2.2	22.45	42.10	12.73	21.17	22.39	245.43
2412342.5	3.49	2.1	22.29	42.04	12.77	21.91	22.51	246.06
2412343.5	3.52	2.1	22.12	41.99	12.82	22.63	22.62	246.69
2412344.5	3.55	-2.1	21.94	41.95	-12.87	+23.34	-22.74	247.33

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2412284.5	0.957	23.91	0.90	259.60	356.90	6.57	6.54	.. .. .	.. .. .
2412285.5	0.959	23.32	0.86	259.98	356.89	357.46	357.42	0 10.4	0 10.6
2412286.5	0.961	22.71	0.82	260.40	356.88	348.35	348.32	0 47.8	0 47.9
2412287.5	0.963	22.09	0.79	260.85	356.89	339.27	339.23	1 25.1	1 25.2
2412288.5	0.965	21.46	0.75	261.33	356.90	330.19	330.16	2 02.3	2 02.5
2412289.5	0.967	20.81	0.71	261.85	356.92	321.12	321.09	2 39.5	2 39.7
2412290.5	0.969	20.16	0.67	262.41	356.95	312.07	312.04	3 16.7	3 16.8
2412291.5	0.971	19.49	0.64	263.01	356.99	303.03	303.00	3 53.7	3 53.9
2412292.5	0.973	18.81	0.60	263.67	357.04	294.00	293.97	4 30.8	4 30.9
2412293.5	0.975	18.13	0.56	264.39	357.09	284.99	284.96	5 07.7	5 07.9
2412294.5	0.977	17.43	0.52	265.17	357.15	275.99	275.95	5 44.7	5 44.8
2412295.5	0.979	16.72	0.48	266.02	357.22	266.99	266.96	6 21.5	6 21.7
2412296.5	0.981	16.01	0.45	266.95	357.30	258.01	257.98	6 58.4	6 58.5
2412297.5	0.982	15.28	0.41	267.98	357.39	249.05	249.01	7 35.1	7 35.3
2412298.5	0.984	14.55	0.37	269.12	357.48	240.09	240.06	8 11.9	8 12.0
2412299.5	0.986	13.82	0.34	270.38	357.58	231.14	231.11	8 48.5	8 48.7
2412300.5	0.987	13.08	0.31	271.79	357.69	222.21	222.18	9 25.2	9 25.3
2412301.5	0.988	12.34	0.27	273.37	357.80	213.28	213.25	10 01.8	10 01.9
2412302.5	0.990	11.59	0.24	275.16	357.92	204.37	204.33	10 38.3	10 38.5
2412303.5	0.991	10.86	0.21	277.19	358.05	195.46	195.43	11 14.8	11 15.0
2412304.5	0.992	10.12	0.19	279.52	358.18	186.56	186.53	11 51.3	11 51.5
2412305.5	0.993	9.40	0.16	282.21	358.32	177.67	177.64	12 27.8	12 27.9
2412306.5	0.994	8.69	0.14	285.35	358.46	168.78	168.75	13 04.2	13 04.3
2412307.5	0.995	8.00	0.12	289.04	358.61	159.91	159.87	13 40.6	13 40.7
2412308.5	0.996	7.34	0.10	293.39	358.76	151.04	151.00	14 17.0	14 17.1
2412309.5	0.997	6.72	0.08	298.57	358.92	142.17	142.14	14 53.3	14 53.4
2412310.5	0.997	6.17	0.07	304.74	359.08	133.31	133.28	15 29.6	15 29.8
2412311.5	0.998	5.69	0.06	312.03	359.24	124.45	124.42	16 06.0	16 06.1
2412312.5	0.998	5.31	0.05	320.50	359.41	115.59	115.56	16 42.3	16 42.4
2412313.5	0.998	5.05	0.05	330.05	359.58	106.74	106.71	17 18.6	17 18.7
2412314.5	0.998	4.95	0.05	340.30	359.74	97.89	97.86	17 54.9	17 55.0
2412315.5	0.998	4.99	0.05	350.69	359.91	89.04	89.01	18 31.2	18 31.3
2412316.5	0.998	5.19	0.05	0.59	0.08	80.19	80.16	19 07.4	19 07.6
2412317.5	0.998	5.53	0.06	9.55	0.25	71.34	71.31	19 43.7	19 43.9
2412318.5	0.997	5.97	0.07	17.35	0.42	62.49	62.46	20 20.1	20 20.2
2412319.5	0.997	6.51	0.08	23.98	0.59	53.63	53.60	20 56.4	20 56.5
2412320.5	0.996	7.11	0.10	29.57	0.76	44.78	44.75	21 32.7	21 32.8
2412321.5	0.995	7.76	0.11	34.27	0.93	35.92	35.89	22 09.0	22 09.2
2412322.5	0.995	8.45	0.13	38.25	1.09	27.06	27.02	22 45.4	22 45.5
2412323.5	0.994	9.16	0.16	41.63	1.25	18.19	18.16	23 21.8	23 21.9
2412324.5	0.993	9.89	0.18	44.52	1.41	9.32	9.28	23 58.2	23 58.3
2412325.5	0.991	10.64	0.21	47.03	1.56	0.44	0.41	.. .. .	.. .. .
2412326.5	0.990	11.40	0.24	49.21	1.71	351.55	351.52	0 34.6	0 34.8
2412327.5	0.989	12.16	0.27	51.13	1.86	342.66	342.63	1 11.1	1 11.2
2412328.5	0.987	12.92	0.31	52.83	2.00	333.76	333.73	1 47.6	1 47.7
2412329.5	0.986	13.68	0.34	54.34	2.14	324.85	324.82	2 24.2	2 24.3
2412330.5	0.984	14.45	0.38	55.70	2.27	315.94	315.91	3 00.7	3 00.9
2412331.5	0.983	15.20	0.42	56.92	2.39	307.01	306.98	3 37.3	3 37.5
2412332.5	0.981	15.95	0.46	58.03	2.51	298.08	298.05	4 14.0	4 14.1
2412333.5	0.979	16.70	0.50	59.04	2.62	289.13	289.10	4 50.7	4 50.8
2412334.5	0.977	17.44	0.54	59.97	2.72	280.18	280.14	5 27.5	5 27.6
2412335.5	0.975	18.17	0.58	60.81	2.82	271.21	271.18	6 04.3	6 04.4
2412336.5	0.973	18.89	0.63	61.59	2.91	262.23	262.20	6 41.1	6 41.2
2412337.5	0.971	19.60	0.67	62.31	2.99	253.24	253.21	7 18.0	7 18.1
2412338.5	0.969	20.30	0.71	62.98	3.06	244.24	244.20	7 55.0	7 55.1
2412339.5	0.967	20.99	0.76	63.59	3.12	235.22	235.19	8 32.0	8 32.1
2412340.5	0.965	21.67	0.80	64.16	3.18	226.19	226.16	9 09.0	9 09.1
2412341.5	0.962	22.34	0.84	64.70	3.23	217.15	217.12	9 46.1	9 46.3
2412342.5	0.960	22.99	0.89	65.19	3.27	208.10	208.07	10 23.3	10 23.4
2412343.5	0.958	23.64	0.93	65.65	3.30	199.03	199.00	11 00.5	11 00.7
2412344.5	0.956	24.27	0.97	66.08	3.32	189.96	189.92	11 37.8	11 37.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2413092.5	3.87	-1.8	20.09	132.84	-15.47	-25.66	-23.78	285.68
2413093.5	3.85	1.9	20.22	132.77	15.51	24.92	23.71	286.30
2413094.5	3.82	1.9	20.34	132.68	15.57	24.17	23.63	286.91
2413095.5	3.80	1.9	20.46	132.58	15.63	23.41	23.54	287.52
2413096.5	3.78	1.9	20.58	132.47	15.69	22.63	23.46	288.13
2413097.5	3.76	-2.0	20.69	132.34	-15.76	-21.84	-23.37	288.75
2413098.5	3.74	2.0	20.80	132.20	15.84	21.04	23.28	289.36
2413099.5	3.72	2.0	20.90	132.04	15.92	20.23	23.18	289.97
2413100.5	3.71	2.0	21.00	131.87	16.01	19.41	23.09	290.58
2413101.5	3.69	2.0	21.09	131.69	16.10	18.58	22.99	291.19
2413102.5	3.67	-2.1	21.18	131.50	-16.20	-17.73	-22.89	291.79
2413103.5	3.66	2.1	21.26	131.29	16.31	16.88	22.78	292.40
2413104.5	3.64	2.1	21.34	131.07	16.41	16.01	22.68	293.01
2413105.5	3.63	2.1	21.41	130.85	16.53	15.14	22.57	293.61
2413106.5	3.62	2.1	21.47	130.61	16.65	14.26	22.46	294.22
2413107.5	3.61	-2.1	21.53	130.36	-16.77	-13.37	-22.34	294.82
2413108.5	3.60	2.2	21.58	130.10	16.89	12.47	22.23	295.43
2413109.5	3.60	2.2	21.62	129.84	17.02	11.56	22.11	296.03
2413110.5	3.59	2.2	21.65	129.56	17.16	10.65	21.99	296.63
2413111.5	3.59	2.2	21.68	129.28	17.29	9.73	21.87	297.23
2413112.5	3.58	-2.2	21.70	128.99	-17.43	- 8.81	-21.74	297.83
2413113.5	3.58	2.2	21.71	128.69	17.58	7.89	21.61	298.43
2413114.5	3.58	2.2	21.72	128.39	17.72	6.96	21.48	299.03
2413115.5	3.58	2.3	21.71	128.09	17.87	6.02	21.35	299.63
2413116.5	3.58	2.3	21.70	127.78	18.02	5.09	21.22	300.23
2413117.5	3.59	-2.3	21.68	127.46	-18.17	- 4.15	-21.08	300.82
2413118.5	3.59	2.3	21.65	127.15	18.32	3.22	20.94	301.42
2413119.5	3.60	2.3	21.62	126.83	18.47	2.28	20.80	302.01
2413120.5	3.61	2.3	21.57	126.51	18.62	1.35	20.66	302.61
2413121.5	3.61	2.3	21.52	126.19	18.77	- 0.42	20.52	303.20
2413122.5	3.62	-2.3	21.46	125.87	-18.92	+ 0.52	-20.37	303.79
2413123.5	3.64	2.3	21.39	125.56	19.08	1.44	20.22	304.38
2413124.5	3.65	2.3	21.31	125.24	19.23	2.36	20.07	304.97
2413125.5	3.66	2.2	21.23	124.93	19.38	3.28	19.92	305.56
2413126.5	3.68	2.2	21.14	124.63	19.52	4.19	19.77	306.15
2413127.5	3.70	-2.2	21.04	124.32	-19.67	+ 5.10	-19.61	306.74
2413128.5	3.72	2.2	20.93	124.03	19.82	5.99	19.46	307.32
2413129.5	3.74	2.1	20.82	123.73	19.96	6.88	19.30	307.91
2413130.5	3.76	2.1	20.70	123.45	20.10	7.76	19.14	308.49
2413131.5	3.78	2.1	20.57	123.18	20.24	8.63	18.98	309.08
2413132.5	3.80	-2.1	20.44	122.91	-20.37	+ 9.49	-18.81	309.66
2413133.5	3.83	2.0	20.31	122.65	20.50	10.34	18.65	310.24
2413134.5	3.86	2.0	20.16	122.40	20.63	11.17	18.48	310.83
2413135.5	3.89	2.0	20.02	122.17	20.76	11.99	18.31	311.41
2413136.5	3.92	1.9	19.87	121.94	20.88	12.80	18.14	311.99
2413137.5	3.95	-1.9	19.71	121.72	-21.00	+13.60	-17.97	312.56
2413138.5	3.98	1.9	19.55	121.52	21.11	14.38	17.80	313.14
2413139.5	4.01	1.9	19.39	121.33	21.22	15.15	17.62	313.72
2413140.5	4.05	1.8	19.22	121.15	21.33	15.90	17.45	314.29
2413141.5	4.08	1.8	19.05	120.99	21.43	16.64	17.27	314.87
2413142.5	4.12	-1.8	18.88	120.83	-21.53	+17.36	-17.09	315.44
2413143.5	4.16	1.7	18.71	120.69	21.63	18.07	16.91	316.01
2413144.5	4.20	1.7	18.53	120.57	21.72	18.77	16.73	316.59
2413145.5	4.24	1.7	18.35	120.46	21.81	19.44	16.55	317.16
2413146.5	4.28	1.6	18.17	120.36	21.89	20.10	16.36	317.73
2413147.5	4.32	-1.6	17.99	120.27	-21.97	+20.75	-16.18	318.30
2413148.5	4.37	1.6	17.81	120.20	22.04	21.38	15.99	318.87
2413149.5	4.41	1.5	17.63	120.14	22.11	21.99	15.81	319.43
2413150.5	4.46	1.5	17.45	120.10	22.18	22.59	15.62	320.00
2413151.5	4.50	1.5	17.27	120.07	22.24	23.18	15.43	320.57
2413152.5	4.55	-1.4	17.09	120.06	-22.30	+23.74	-15.24	321.13

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2413092.5	0.951	25.51	0.98	255.34	322.28	126.18	126.14	15 59.4	15 59.5
2413093.5	0.954	24.82	0.93	255.47	322.28	117.15	117.11	16 36.4	16 36.5
2413094.5	0.956	24.11	0.89	255.61	322.29	108.13	108.10	17 13.3	17 13.4
2413095.5	0.959	23.39	0.84	255.75	322.29	99.13	99.10	17 50.2	17 50.3
2413096.5	0.961	22.66	0.79	255.90	322.30	90.14	90.11	18 27.0	18 27.2
2413097.5	0.964	21.91	0.75	256.06	322.31	81.16	81.13	19 03.8	19 03.9
2413098.5	0.966	21.15	0.70	256.23	322.33	72.20	72.17	19 40.5	19 40.7
2413099.5	0.969	20.38	0.65	256.41	322.34	63.26	63.22	20 17.2	20 17.3
2413100.5	0.971	19.59	0.61	256.60	322.35	54.32	54.29	20 53.8	20 53.9
2413101.5	0.973	18.79	0.56	256.80	322.37	45.40	45.37	21 30.3	21 30.5
2413102.5	0.976	17.98	0.52	257.02	322.39	36.49	36.46	22 06.9	22 07.0
2413103.5	0.978	17.16	0.47	257.27	322.41	27.59	27.56	22 43.3	22 43.4
2413104.5	0.980	16.32	0.43	257.53	322.43	18.70	18.67	23 19.7	23 19.8
2413105.5	0.982	15.48	0.39	257.83	322.46	9.82	9.79	23 56.1	23 56.2
2413106.5	0.984	14.63	0.35	258.16	322.48	0.96	0.92	.. .. .	.. .. .
2413107.5	0.986	13.76	0.31	258.54	322.51	352.10	352.07	0 32.4	0 32.5
2413108.5	0.987	12.89	0.27	258.97	322.54	343.25	343.22	1 08.7	1 08.8
2413109.5	0.989	12.02	0.24	259.46	322.57	334.41	334.38	1 44.9	1 45.1
2413110.5	0.991	11.13	0.20	260.03	322.61	325.58	325.55	2 21.1	2 21.3
2413111.5	0.992	10.24	0.17	260.71	322.64	316.76	316.72	2 57.3	2 57.5
2413112.5	0.993	9.35	0.14	261.52	322.68	307.94	307.91	3 33.5	3 33.6
2413113.5	0.995	8.45	0.12	262.52	322.72	299.13	299.09	4 09.6	4 09.7
2413114.5	0.996	7.56	0.09	263.76	322.76	290.32	290.29	4 45.7	4 45.8
2413115.5	0.997	6.66	0.07	265.34	322.80	281.52	281.48	5 21.8	5 21.9
2413116.5	0.997	5.77	0.05	267.42	322.85	272.72	272.69	5 57.9	5 58.0
2413117.5	0.998	4.88	0.04	270.27	322.89	263.92	263.89	6 33.9	6 34.1
2413118.5	0.999	4.01	0.03	274.39	322.94	255.13	255.10	7 10.0	7 10.1
2413119.5	0.999	3.17	0.02	280.74	322.99	246.34	246.30	7 46.0	7 46.2
2413120.5	1.000	2.40	0.01	291.40	323.04	237.54	237.51	8 22.1	8 22.2
2413121.5	1.000	1.79	0.01	310.55	323.09	228.75	228.72	8 58.1	8 58.3
2413122.5	1.000	1.53	0.00	341.58	323.14	219.96	219.93	9 34.2	9 34.3
2413123.5	1.000	1.78	0.01	12.74	323.20	211.17	211.13	10 10.2	10 10.4
2413124.5	1.000	2.38	0.01	32.01	323.25	202.37	202.34	10 46.3	10 46.5
2413125.5	0.999	3.14	0.02	42.72	323.31	193.57	193.54	11 22.4	11 22.5
2413126.5	0.999	3.96	0.03	49.11	323.36	184.76	184.73	11 58.5	11 58.7
2413127.5	0.998	4.80	0.04	53.24	323.42	175.96	175.92	12 34.7	12 34.8
2413128.5	0.998	5.66	0.05	56.10	323.47	167.14	167.11	13 10.8	13 11.0
2413129.5	0.997	6.52	0.07	58.18	323.53	158.32	158.29	13 47.0	13 47.1
2413130.5	0.996	7.37	0.09	59.76	323.58	149.49	149.46	14 23.2	14 23.4
2413131.5	0.995	8.23	0.11	60.99	323.64	140.65	140.62	14 59.5	14 59.6
2413132.5	0.994	9.07	0.13	61.97	323.69	131.80	131.77	15 35.8	15 35.9
2413133.5	0.993	9.91	0.15	62.77	323.74	122.95	122.91	16 12.2	16 12.3
2413134.5	0.991	10.74	0.18	63.44	323.79	114.08	114.05	16 48.6	16 48.7
2413135.5	0.990	11.56	0.20	64.00	323.84	105.20	105.17	17 25.0	17 25.1
2413136.5	0.988	12.37	0.23	64.47	323.89	96.31	96.28	18 01.5	18 01.6
2413137.5	0.987	13.17	0.26	64.88	323.93	87.41	87.38	18 38.0	18 38.2
2413138.5	0.985	13.95	0.29	65.23	323.97	78.50	78.47	19 14.6	19 14.8
2413139.5	0.984	14.73	0.32	65.54	324.01	69.57	69.54	19 51.3	19 51.4
2413140.5	0.982	15.49	0.35	65.82	324.05	60.64	60.60	20 28.0	20 28.1
2413141.5	0.980	16.23	0.38	66.06	324.08	51.68	51.65	21 04.8	21 04.9
2413142.5	0.978	16.97	0.41	66.27	324.12	42.72	42.69	21 41.6	21 41.7
2413143.5	0.976	17.69	0.44	66.46	324.15	33.74	33.71	22 18.5	22 18.6
2413144.5	0.974	18.39	0.47	66.64	324.17	24.75	24.72	22 55.4	22 55.5
2413145.5	0.973	19.08	0.50	66.79	324.20	15.74	15.71	23 32.4	23 32.5
2413146.5	0.971	19.76	0.54	66.93	324.21	6.72	6.69	.. .. .	.. .. .
2413147.5	0.969	20.42	0.57	67.06	324.23	357.69	357.66	0 09.5	0 09.6
2413148.5	0.967	21.07	0.60	67.18	324.24	348.64	348.61	0 46.6	0 46.7
2413149.5	0.965	21.71	0.63	67.29	324.25	339.58	339.55	1 23.8	1 23.9
2413150.5	0.963	22.33	0.65	67.39	324.26	330.51	330.47	2 01.0	2 01.2
2413151.5	0.960	22.94	0.68	67.48	324.26	321.42	321.38	2 38.3	2 38.5
2413152.5	0.958	23.53	0.71	67.56	324.26	312.31	312.28	3 15.7	3 15.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2413874.5	5.07	-1.1	15.33	184.62	+ 2.11	-22.62	− 8.11	340.32
2413875.5	5.04	1.1	15.43	184.52	2.00	22.03	7.90	340.85
2413876.5	5.01	1.2	15.52	184.41	1.89	21.43	7.69	341.38
2413877.5	4.98	1.2	15.61	184.28	1.77	20.81	7.48	341.90
2413878.5	4.95	1.2	15.70	184.15	1.65	20.19	7.26	342.43
2413879.5	4.92	-1.2	15.79	184.00	+ 1.52	-19.55	− 7.05	342.96
2413880.5	4.90	1.2	15.88	183.83	1.38	18.90	6.84	343.49
2413881.5	4.87	1.3	15.96	183.66	1.24	18.24	6.63	344.01
2413882.5	4.85	1.3	16.04	183.47	1.09	17.58	6.41	344.53
2413883.5	4.83	1.3	16.11	183.27	0.94	16.90	6.20	345.06
2413884.5	4.81	-1.3	16.18	183.06	+ 0.78	-16.21	− 5.99	345.58
2413885.5	4.79	1.3	16.25	182.84	0.62	15.51	5.77	346.10
2413886.5	4.77	1.4	16.31	182.61	0.45	14.80	5.56	346.62
2413887.5	4.75	1.4	16.37	182.37	0.27	14.08	5.35	347.14
2413888.5	4.73	1.4	16.43	182.12	+ 0.09	13.35	5.14	347.66
2413889.5	4.72	-1.4	16.48	181.86	− 0.09	-12.62	− 4.92	348.18
2413890.5	4.71	1.4	16.52	181.58	0.28	11.87	4.71	348.70
2413891.5	4.70	1.4	16.56	181.30	0.47	11.12	4.50	349.21
2413892.5	4.69	1.5	16.60	181.02	0.67	10.36	4.28	349.73
2413893.5	4.68	1.5	16.63	180.72	0.86	9.60	4.07	350.24
2413894.5	4.67	-1.5	16.65	180.42	− 1.06	− 8.82	− 3.86	350.76
2413895.5	4.67	1.5	16.67	180.11	1.27	8.05	3.65	351.27
2413896.5	4.66	1.5	16.68	179.79	1.47	7.26	3.43	351.78
2413897.5	4.66	1.5	16.69	179.47	1.68	6.48	3.22	352.29
2413898.5	4.66	1.5	16.69	179.15	1.89	5.69	3.01	352.80
2413899.5	4.66	-1.5	16.69	178.82	− 2.09	− 4.90	− 2.80	353.31
2413900.5	4.66	1.5	16.67	178.49	2.30	4.10	2.58	353.82
2413901.5	4.67	1.6	16.66	178.16	2.51	3.31	2.37	354.33
2413902.5	4.68	1.6	16.63	177.82	2.72	2.52	2.16	354.83
2413903.5	4.68	1.6	16.60	177.49	2.92	1.72	1.95	355.34
2413904.5	4.69	-1.6	16.57	177.15	− 3.13	− 0.93	− 1.74	355.85
2413905.5	4.71	1.6	16.52	176.82	3.33	− 0.14	1.53	356.35
2413906.5	4.72	1.5	16.48	176.49	3.53	+ 0.65	1.32	356.85
2413907.5	4.74	1.5	16.42	176.16	3.73	1.44	1.11	357.36
2413908.5	4.75	1.5	16.36	175.83	3.92	2.22	0.90	357.86
2413909.5	4.77	-1.5	16.30	175.51	− 4.11	+ 3.00	− 0.69	358.36
2413910.5	4.79	1.5	16.23	175.19	4.30	3.77	0.48	358.86
2413911.5	4.82	1.4	16.15	174.88	4.48	4.54	0.27	359.36
2413912.5	4.84	1.4	16.07	174.57	4.66	5.30	− 0.06	359.86
2413913.5	4.86	1.4	15.99	174.27	4.83	6.05	+ 0.15	0.36
2413914.5	4.89	-1.4	15.90	173.98	− 5.00	+ 6.80	+ 0.36	0.85
2413915.5	4.92	1.3	15.81	173.69	5.16	7.53	0.57	1.35
2413916.5	4.95	1.3	15.71	173.41	5.32	8.26	0.77	1.84
2413917.5	4.98	1.3	15.61	173.14	5.47	8.98	0.98	2.34
2413918.5	5.02	1.2	15.51	172.88	5.62	9.69	1.19	2.83
2413919.5	5.05	-1.2	15.40	172.63	− 5.75	+10.39	+ 1.39	3.33
2413920.5	5.09	1.2	15.29	172.39	5.89	11.08	1.60	3.82
2413921.5	5.13	1.2	15.17	172.15	6.02	11.76	1.80	4.31
2413922.5	5.17	1.1	15.06	171.93	6.14	12.43	2.01	4.80
2413923.5	5.21	1.1	14.94	171.72	6.25	13.09	2.21	5.29
2413924.5	5.25	-1.1	14.82	171.52	− 6.36	+13.74	+ 2.42	5.78
2413925.5	5.29	1.0	14.69	171.33	6.46	14.37	2.62	6.27
2413926.5	5.34	1.0	14.57	171.15	6.55	15.00	2.83	6.76
2413927.5	5.38	1.0	14.44	170.98	6.64	15.61	3.03	7.25
2413928.5	5.43	1.0	14.32	170.82	6.72	16.21	3.23	7.73
2413929.5	5.48	-0.9	14.19	170.68	− 6.79	+16.79	+ 3.43	8.22
2413930.5	5.53	0.9	14.06	170.55	6.86	17.37	3.63	8.70
2413931.5	5.58	0.9	13.93	170.43	6.92	17.93	3.84	9.19
2413932.5	5.64	0.8	13.80	170.32	6.97	18.48	4.04	9.67
2413933.5	5.69	0.8	13.67	170.22	7.01	19.01	4.24	10.16
2413934.5	5.75	-0.8	13.53	170.14	− 7.05	+19.54	+ 4.43	10.64

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2413874.5	0.954	24.76	0.70	268.04	333.41	151.62	151.59	14 14.9	14 15.0
2413875.5	0.956	24.10	0.67	267.86	333.34	142.62	142.59	14 51.8	14 51.9
2413876.5	0.959	23.42	0.64	267.66	333.27	133.63	133.60	15 28.6	15 28.8
2413877.5	0.961	22.73	0.61	267.44	333.19	124.65	124.62	16 05.4	16 05.5
2413878.5	0.964	22.02	0.57	267.21	333.10	115.69	115.66	16 42.2	16 42.3
2413879.5	0.966	21.31	0.54	266.96	333.01	106.74	106.71	17 18.8	17 19.0
2413880.5	0.968	20.58	0.51	266.69	332.91	97.80	97.77	17 55.5	17 55.6
2413881.5	0.970	19.83	0.47	266.39	332.80	88.87	88.84	18 32.1	18 32.2
2413882.5	0.973	19.08	0.44	266.07	332.69	79.95	79.93	19 08.6	19 08.7
2413883.5	0.975	18.31	0.41	265.73	332.57	71.05	71.02	19 45.1	19 45.2
2413884.5	0.977	17.54	0.38	265.35	332.44	62.16	62.13	20 21.5	20 21.6
2413885.5	0.979	16.75	0.34	264.95	332.31	53.28	53.25	20 57.9	20 58.0
2413886.5	0.981	15.95	0.31	264.50	332.18	44.40	44.38	21 34.2	21 34.4
2413887.5	0.983	15.14	0.28	264.02	332.04	35.54	35.51	22 10.5	22 10.7
2413888.5	0.984	14.32	0.26	263.49	331.89	26.69	26.66	22 46.8	22 46.9
2413889.5	0.986	13.49	0.23	262.91	331.74	17.85	17.82	23 23.0	23 23.1
2413890.5	0.988	12.66	0.20	262.26	331.58	9.01	8.99	23 59.2	23 59.3
2413891.5	0.989	11.81	0.18	261.53	331.43	0.19	0.16	.. .. .	.. .. .
2413892.5	0.991	10.96	0.15	260.70	331.26	351.37	351.34	0 35.4	0 35.5
2413893.5	0.992	10.10	0.13	259.76	331.10	342.56	342.53	1 11.5	1 11.6
2413894.5	0.994	9.24	0.11	258.67	330.93	333.76	333.73	1 47.6	1 47.7
2413895.5	0.995	8.38	0.09	257.39	330.76	324.96	324.93	2 23.7	2 23.8
2413896.5	0.996	7.52	0.07	255.84	330.59	316.17	316.14	2 59.7	2 59.8
2413897.5	0.997	6.65	0.06	253.94	330.42	307.38	307.35	3 35.7	3 35.9
2413898.5	0.997	5.79	0.04	251.53	330.24	298.60	298.57	4 11.7	4 11.9
2413899.5	0.998	4.94	0.03	248.33	330.07	289.82	289.79	4 47.7	4 47.9
2413900.5	0.999	4.11	0.02	243.91	329.89	281.04	281.01	5 23.7	5 23.9
2413901.5	0.999	3.31	0.01	237.41	329.72	272.26	272.23	5 59.7	5 59.8
2413902.5	0.999	2.57	0.01	227.11	329.55	263.49	263.46	6 35.7	6 35.8
2413903.5	1.000	1.97	0.00	209.85	329.38	254.71	254.68	7 11.7	7 11.8
2413904.5	1.000	1.67	0.00	182.84	329.21	245.93	245.91	7 47.7	7 47.8
2413905.5	1.000	1.81	0.00	153.25	329.04	237.16	237.13	8 23.7	8 23.8
2413906.5	1.000	2.31	0.01	132.35	328.87	228.38	228.35	8 59.7	8 59.8
2413907.5	0.999	2.99	0.01	119.87	328.71	219.59	219.57	9 35.7	9 35.8
2413908.5	0.999	3.75	0.02	112.19	328.55	210.81	210.78	10 11.7	10 11.8
2413909.5	0.998	4.55	0.03	107.11	328.39	202.02	201.99	10 47.8	10 47.9
2413910.5	0.998	5.37	0.04	103.52	328.24	193.22	193.20	11 23.8	11 23.9
2413911.5	0.997	6.19	0.05	100.85	328.09	184.42	184.40	11 59.9	12 00.0
2413912.5	0.996	7.01	0.06	98.78	327.94	175.62	175.59	12 36.0	12 36.2
2413913.5	0.995	7.83	0.07	97.11	327.80	166.80	166.78	13 12.2	13 12.3
2413914.5	0.994	8.65	0.09	95.74	327.67	157.98	157.95	13 48.4	13 48.5
2413915.5	0.993	9.46	0.11	94.59	327.53	149.15	149.13	14 24.6	14 24.7
2413916.5	0.992	10.26	0.13	93.60	327.41	140.32	140.29	15 00.9	15 01.0
2413917.5	0.991	11.05	0.14	92.74	327.28	131.47	131.44	15 37.2	15 37.3
2413918.5	0.989	11.83	0.16	91.98	327.17	122.62	122.59	16 13.5	16 13.6
2413919.5	0.988	12.61	0.19	91.30	327.06	113.75	113.72	16 49.9	16 50.0
2413920.5	0.986	13.37	0.21	90.69	326.95	104.88	104.85	17 26.3	17 26.4
2413921.5	0.985	14.11	0.23	90.15	326.85	95.99	95.97	18 02.8	18 02.9
2413922.5	0.983	14.85	0.25	89.65	326.75	87.10	87.07	18 39.3	18 39.4
2413923.5	0.982	15.58	0.27	89.19	326.66	78.19	78.17	19 15.9	19 16.0
2413924.5	0.980	16.29	0.30	88.77	326.58	69.28	69.25	19 52.5	19 52.6
2413925.5	0.978	16.98	0.32	88.38	326.50	60.35	60.32	20 29.1	20 29.2
2413926.5	0.976	17.67	0.34	88.03	326.42	51.41	51.38	21 05.8	21 06.0
2413927.5	0.975	18.34	0.37	87.70	326.35	42.46	42.43	21 42.6	21 42.7
2413928.5	0.973	19.00	0.39	87.39	326.29	33.49	33.47	22 19.4	22 19.5
2413929.5	0.971	19.64	0.41	87.11	326.23	24.52	24.49	22 56.3	22 56.4
2413930.5	0.969	20.27	0.44	86.84	326.18	15.53	15.50	23 33.2	23 33.3
2413931.5	0.967	20.88	0.46	86.60	326.13	6.53	6.50	.. .. .	.. .. .
2413932.5	0.965	21.48	0.48	86.37	326.09	357.51	357.49	0 10.2	0 10.3
2413933.5	0.963	22.06	0.50	86.16	326.05	348.49	348.46	0 47.2	0 47.3
2413934.5	0.961	22.64	0.52	85.96	326.02	339.45	339.42	1 24.3	1 24.4

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2414643.5	6.02	-0.6	12.91	221.93	+15.45	-22.62	+ 8.67	21.10
2414644.5	5.98	0.6	13.00	221.80	15.37	22.05	8.86	21.57
2414645.5	5.94	0.7	13.09	221.66	15.27	21.47	9.04	22.04
2414646.5	5.90	0.7	13.18	221.50	15.18	20.88	9.23	22.51
2414647.5	5.86	0.7	13.26	221.33	15.07	20.28	9.41	22.97
2414648.5	5.83	-0.7	13.35	221.15	+14.97	-19.66	+ 9.59	23.44
2414649.5	5.79	0.8	13.43	220.95	14.86	19.03	9.77	23.90
2414650.5	5.76	0.8	13.51	220.74	14.75	18.38	9.95	24.37
2414651.5	5.72	0.8	13.59	220.52	14.63	17.73	10.13	24.83
2414652.5	5.69	0.8	13.66	220.29	14.51	17.06	10.31	25.30
2414653.5	5.66	-0.8	13.73	220.04	+14.38	-16.38	+10.49	25.76
2414654.5	5.64	0.9	13.80	219.78	14.26	15.69	10.67	26.22
2414655.5	5.61	0.9	13.87	219.51	14.12	14.98	10.84	26.68
2414656.5	5.58	0.9	13.93	219.23	13.99	14.27	11.02	27.14
2414657.5	5.56	0.9	13.99	218.94	13.85	13.55	11.19	27.60
2414658.5	5.54	-0.9	14.05	218.64	+13.71	-12.81	+11.37	28.06
2414659.5	5.52	1.0	14.10	218.33	13.57	12.07	11.54	28.52
2414660.5	5.50	1.0	14.15	218.02	13.42	11.31	11.71	28.98
2414661.5	5.48	1.0	14.19	217.69	13.28	10.55	11.88	29.44
2414662.5	5.47	1.0	14.23	217.35	13.13	9.78	12.05	29.90
2414663.5	5.45	-1.0	14.27	217.01	+12.98	- 9.00	+12.22	30.36
2414664.5	5.44	1.0	14.30	216.66	12.82	8.22	12.39	30.82
2414665.5	5.43	1.1	14.32	216.30	12.67	7.43	12.56	31.27
2414666.5	5.42	1.1	14.35	215.94	12.51	6.63	12.73	31.73
2414667.5	5.42	1.1	14.36	215.58	12.36	5.83	12.89	32.19
2414668.5	5.41	-1.1	14.37	215.21	+12.20	- 5.02	+13.06	32.64
2414669.5	5.41	1.1	14.38	214.84	12.04	4.21	13.22	33.10
2414670.5	5.41	1.1	14.38	214.46	11.89	3.40	13.39	33.55
2414671.5	5.41	1.1	14.38	214.09	11.73	2.59	13.55	34.01
2414672.5	5.41	1.1	14.37	213.71	11.58	1.78	13.71	34.46
2414673.5	5.42	-1.1	14.36	213.33	+11.42	- 0.96	+13.87	34.92
2414674.5	5.42	1.1	14.34	212.96	11.27	- 0.15	14.03	35.37
2414675.5	5.43	1.1	14.32	212.58	11.12	+ 0.66	14.19	35.82
2414676.5	5.44	1.1	14.29	212.21	10.97	1.47	14.35	36.27
2414677.5	5.45	1.1	14.26	211.84	10.82	2.28	14.51	36.73
2414678.5	5.47	-1.1	14.22	211.47	+10.68	+ 3.08	+14.66	37.18
2414679.5	5.48	1.0	14.18	211.11	10.54	3.88	14.82	37.63
2414680.5	5.50	1.0	14.14	210.75	10.40	4.68	14.97	38.08
2414681.5	5.52	1.0	14.09	210.40	10.26	5.47	15.12	38.53
2414682.5	5.54	1.0	14.03	210.06	10.13	6.25	15.28	38.98
2414683.5	5.57	-1.0	13.97	209.72	+10.00	+ 7.03	+15.43	39.43
2414684.5	5.59	0.9	13.91	209.39	9.88	7.80	15.58	39.88
2414685.5	5.62	0.9	13.85	209.06	9.76	8.56	15.73	40.33
2414686.5	5.65	0.9	13.78	208.75	9.64	9.32	15.88	40.78
2414687.5	5.68	0.9	13.70	208.44	9.53	10.06	16.02	41.22
2414688.5	5.71	-0.9	13.63	208.14	+ 9.43	+10.80	+16.17	41.67
2414689.5	5.74	0.8	13.55	207.85	9.33	11.53	16.32	42.12
2414690.5	5.77	0.8	13.47	207.58	9.23	12.25	16.46	42.57
2414691.5	5.81	0.8	13.38	207.31	9.14	12.96	16.60	43.01
2414692.5	5.85	0.8	13.30	207.05	9.05	13.66	16.74	43.46
2414693.5	5.89	-0.7	13.21	206.80	+ 8.97	+14.35	+16.89	43.90
2414694.5	5.93	0.7	13.11	206.57	8.90	15.03	17.03	44.35
2414695.5	5.97	0.7	13.02	206.34	8.83	15.70	17.17	44.80
2414696.5	6.02	0.6	12.93	206.13	8.76	16.35	17.30	45.24
2414697.5	6.06	0.6	12.83	205.93	8.71	17.00	17.44	45.69
2414698.5	6.11	-0.6	12.73	205.74	+ 8.65	+17.63	+17.58	46.13
2414699.5	6.16	0.6	12.63	205.56	8.61	18.25	17.71	46.58
2414700.5	6.21	0.5	12.53	205.40	8.57	18.86	17.84	47.02
2414701.5	6.26	0.5	12.43	205.24	8.53	19.46	17.98	47.46
2414702.5	6.31	0.5	12.33	205.10	8.50	20.05	18.11	47.91
2414703.5	6.36	-0.5	12.23	204.97	+ 8.48	+20.62	+18.24	48.35

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2414643.5	0.960	23.11	0.52	281.18	356.76	310.00	309.97	3 25.1	3 25.2
2414644.5	0.962	22.50	0.49	280.91	356.67	301.03	301.01	4 01.9	4 02.0
2414645.5	0.964	21.87	0.47	280.62	356.57	292.07	292.05	4 38.6	4 38.7
2414646.5	0.966	21.24	0.45	280.31	356.47	283.13	283.11	5 15.3	5 15.4
2414647.5	0.968	20.59	0.42	279.97	356.36	274.20	274.18	5 51.9	5 52.0
2414648.5	0.970	19.93	0.40	279.61	356.24	265.29	265.26	6 28.5	6 28.6
2414649.5	0.972	19.26	0.38	279.22	356.11	256.38	256.36	7 05.0	7 05.1
2414650.5	0.974	18.57	0.35	278.80	355.97	247.49	247.47	7 41.4	7 41.5
2414651.5	0.976	17.88	0.33	278.34	355.82	238.61	238.59	8 17.8	8 17.9
2414652.5	0.978	17.17	0.30	277.85	355.67	229.75	229.73	8 54.2	8 54.2
2414653.5	0.980	16.45	0.28	277.32	355.50	220.89	220.87	9 30.4	9 30.5
2414654.5	0.981	15.72	0.26	276.73	355.33	212.05	212.03	10 06.7	10 06.8
2414655.5	0.983	14.99	0.24	276.09	355.15	203.22	203.19	10 42.9	10 43.0
2414656.5	0.985	14.24	0.21	275.39	354.97	194.39	194.37	11 19.0	11 19.1
2414657.5	0.986	13.48	0.19	274.62	354.77	185.58	185.56	11 55.2	11 55.3
2414658.5	0.988	12.72	0.17	273.76	354.57	176.78	176.76	12 31.2	12 31.3
2414659.5	0.989	11.95	0.15	272.79	354.37	167.99	167.96	13 07.3	13 07.4
2414660.5	0.991	11.17	0.13	271.70	354.15	159.20	159.18	13 43.3	13 43.4
2414661.5	0.992	10.38	0.12	270.46	353.93	150.42	150.40	14 19.2	14 19.3
2414662.5	0.993	9.60	0.10	269.03	353.71	141.65	141.63	14 55.2	14 55.3
2414663.5	0.994	8.81	0.08	267.37	353.48	132.89	132.87	15 31.1	15 31.2
2414664.5	0.995	8.02	0.07	265.40	353.24	124.14	124.12	16 06.9	16 07.0
2414665.5	0.996	7.24	0.06	263.03	353.01	115.39	115.37	16 42.8	16 42.9
2414666.5	0.997	6.47	0.05	260.12	352.76	106.64	106.62	17 18.6	17 18.7
2414667.5	0.998	5.71	0.04	256.47	352.52	97.90	97.88	17 54.5	17 54.6
2414668.5	0.998	4.97	0.03	251.75	352.27	89.16	89.14	18 30.3	18 30.4
2414669.5	0.999	4.27	0.02	245.51	352.02	80.43	80.41	19 06.1	19 06.2
2414670.5	0.999	3.64	0.01	237.03	351.77	71.70	71.67	19 41.9	19 42.0
2414671.5	0.999	3.11	0.01	225.42	351.52	62.96	62.94	20 17.7	20 17.8
2414672.5	0.999	2.75	0.01	210.05	351.26	54.23	54.21	20 53.5	20 53.6
2414673.5	0.999	2.63	0.01	191.79	351.01	45.50	45.48	21 29.3	21 29.4
2414674.5	0.999	2.77	0.01	173.69	350.75	36.77	36.75	22 05.1	22 05.2
2414675.5	0.999	3.14	0.01	158.65	350.50	28.03	28.01	22 40.9	22 41.0
2414676.5	0.999	3.68	0.01	147.36	350.25	19.29	19.27	23 16.7	23 16.8
2414677.5	0.999	4.31	0.02	139.12	350.00	10.55	10.53	23 52.6	23 52.7
2414678.5	0.998	5.00	0.03	133.03	349.76	1.81	1.78	.. .. .	.. .. .
2414679.5	0.998	5.72	0.04	128.42	349.52	353.06	353.03	0 28.5	0 28.6
2414680.5	0.997	6.46	0.04	124.83	349.28	344.30	344.28	1 04.4	1 04.5
2414681.5	0.996	7.22	0.06	121.97	349.04	335.54	335.52	1 40.3	1 40.4
2414682.5	0.995	7.98	0.07	119.62	348.81	326.77	326.75	2 16.2	2 16.3
2414683.5	0.994	8.75	0.08	117.67	348.58	318.00	317.97	2 52.2	2 52.3
2414684.5	0.993	9.51	0.10	116.01	348.36	309.21	309.19	3 28.2	3 28.3
2414685.5	0.992	10.27	0.11	114.58	348.14	300.42	300.40	4 04.3	4 04.4
2414686.5	0.991	11.02	0.13	113.34	347.93	291.62	291.60	4 40.4	4 40.5
2414687.5	0.989	11.77	0.14	112.24	347.73	282.81	282.79	5 16.5	5 16.6
2414688.5	0.988	12.51	0.16	111.26	347.53	274.00	273.98	5 52.7	5 52.7
2414689.5	0.987	13.24	0.18	110.39	347.34	265.17	265.15	6 28.9	6 29.0
2414690.5	0.985	13.96	0.20	109.59	347.16	256.33	256.31	7 05.1	7 05.2
2414691.5	0.984	14.67	0.22	108.87	346.98	247.48	247.46	7 41.4	7 41.5
2414692.5	0.982	15.37	0.24	108.22	346.81	238.63	238.60	8 17.8	8 17.9
2414693.5	0.980	16.06	0.26	107.61	346.65	229.75	229.73	8 54.2	8 54.2
2414694.5	0.979	16.74	0.28	107.06	346.49	220.87	220.85	9 30.6	9 30.7
2414695.5	0.977	17.41	0.30	106.55	346.34	211.98	211.96	10 07.1	10 07.2
2414696.5	0.975	18.06	0.32	106.07	346.20	203.07	203.05	10 43.7	10 43.7
2414697.5	0.974	18.71	0.34	105.63	346.07	194.15	194.13	11 20.3	11 20.3
2414698.5	0.972	19.33	0.36	105.22	345.95	185.22	185.20	11 56.9	11 57.0
2414699.5	0.970	19.95	0.38	104.83	345.84	176.28	176.26	12 33.6	12 33.7
2414700.5	0.968	20.55	0.40	104.48	345.73	167.33	167.31	13 10.4	13 10.5
2414701.5	0.966	21.14	0.42	104.15	345.63	158.36	158.34	13 47.2	13 47.3
2414702.5	0.964	21.72	0.44	103.83	345.54	149.38	149.36	14 24.1	14 24.2
2414703.5	0.963	22.28	0.46	103.54	345.46	140.39	140.37	15 01.0	15 01.1

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2415407.5	6.48	-0.4	12.00	257.11	+21.96	-23.86	+20.28	55.86
2415408.5	6.43	0.4	12.10	256.96	21.92	23.26	20.39	56.29
2415409.5	6.38	0.5	12.19	256.81	21.88	22.65	20.50	56.73
2415410.5	6.33	0.5	12.28	256.64	21.83	22.03	20.61	57.17
2415411.5	6.29	0.5	12.37	256.45	21.79	21.39	20.71	57.61
2415412.5	6.24	-0.5	12.46	256.25	+21.75	-20.74	+20.82	58.05
2415413.5	6.20	0.6	12.55	256.04	21.70	20.07	20.92	58.49
2415414.5	6.16	0.6	12.64	255.82	21.65	19.39	21.02	58.93
2415415.5	6.11	0.6	12.72	255.58	21.61	18.69	21.13	59.37
2415416.5	6.08	0.6	12.80	255.33	21.56	17.98	21.22	59.80
2415417.5	6.04	-0.7	12.88	255.06	+21.51	-17.26	+21.32	60.24
2415418.5	6.00	0.7	12.96	254.78	21.47	16.52	21.42	60.68
2415419.5	5.97	0.7	13.04	254.50	21.42	15.77	21.52	61.12
2415420.5	5.93	0.7	13.11	254.19	21.37	15.01	21.61	61.55
2415421.5	5.90	0.7	13.18	253.88	21.32	14.24	21.70	61.99
2415422.5	5.87	-0.8	13.25	253.56	+21.26	-13.46	+21.80	62.43
2415423.5	5.84	0.8	13.31	253.22	21.21	12.66	21.89	62.87
2415424.5	5.82	0.8	13.37	252.88	21.16	11.85	21.98	63.30
2415425.5	5.79	0.8	13.43	252.52	21.11	11.04	22.06	63.74
2415426.5	5.77	0.8	13.49	252.16	21.06	10.21	22.15	64.18
2415427.5	5.75	-0.9	13.54	251.79	+21.00	- 9.37	+22.24	64.62
2415428.5	5.73	0.9	13.58	251.40	20.95	8.53	22.32	65.05
2415429.5	5.71	0.9	13.63	251.02	20.89	7.68	22.40	65.49
2415430.5	5.69	0.9	13.67	250.62	20.84	6.82	22.48	65.93
2415431.5	5.68	0.9	13.70	250.22	20.79	5.95	22.57	66.36
2415432.5	5.66	-1.0	13.73	249.82	+20.73	- 5.08	+22.64	66.80
2415433.5	5.65	1.0	13.76	249.41	20.68	4.21	22.72	67.24
2415434.5	5.64	1.0	13.78	248.99	20.62	3.33	22.80	67.67
2415435.5	5.64	1.0	13.79	248.57	20.57	2.44	22.87	68.11
2415436.5	5.63	1.0	13.81	248.15	20.51	1.56	22.94	68.55
2415437.5	5.63	-1.0	13.81	247.73	+20.46	- 0.67	+23.02	68.98
2415438.5	5.63	1.0	13.82	247.31	20.41	+ 0.22	23.09	69.42
2415439.5	5.63	1.0	13.82	246.89	20.36	1.11	23.16	69.86
2415440.5	5.63	1.0	13.81	246.48	20.30	2.00	23.22	70.29
2415441.5	5.64	1.0	13.80	246.06	20.25	2.88	23.29	70.73
2415442.5	5.64	-1.0	13.78	245.65	+20.20	+ 3.76	+23.36	71.17
2415443.5	5.65	1.0	13.76	245.24	20.15	4.64	23.42	71.60
2415444.5	5.66	0.9	13.74	244.83	20.11	5.52	23.48	72.04
2415445.5	5.67	0.9	13.71	244.43	20.06	6.39	23.54	72.47
2415446.5	5.69	0.9	13.68	244.04	20.01	7.26	23.60	72.91
2415447.5	5.70	-0.9	13.64	243.65	+19.97	+ 8.12	+23.66	73.35
2415448.5	5.72	0.9	13.60	243.27	19.93	8.97	23.72	73.78
2415449.5	5.74	0.9	13.55	242.89	19.89	9.82	23.77	74.22
2415450.5	5.76	0.8	13.50	242.53	19.85	10.66	23.82	74.66
2415451.5	5.78	0.8	13.45	242.17	19.82	11.49	23.88	75.09
2415452.5	5.81	-0.8	13.40	241.83	+19.78	+12.31	+23.93	75.53
2415453.5	5.83	0.8	13.34	241.49	19.75	13.12	23.98	75.97
2415454.5	5.86	0.8	13.27	241.16	19.72	13.93	24.02	76.41
2415455.5	5.89	0.7	13.21	240.84	19.69	14.72	24.07	76.84
2415456.5	5.92	0.7	13.14	240.54	19.67	15.50	24.12	77.28
2415457.5	5.95	-0.7	13.07	240.24	+19.64	+16.27	+24.16	77.72
2415458.5	5.98	0.7	13.00	239.96	19.63	17.03	24.20	78.15
2415459.5	6.02	0.6	12.92	239.69	19.61	17.78	24.24	78.59
2415460.5	6.06	0.6	12.84	239.43	19.59	18.52	24.28	79.03
2415461.5	6.09	0.6	12.76	239.18	19.58	19.24	24.32	79.47
2415462.5	6.13	-0.6	12.68	238.95	+19.57	+19.96	+24.35	79.90
2415463.5	6.17	0.6	12.60	238.73	19.57	20.65	24.39	80.34
2415464.5	6.22	0.5	12.51	238.52	19.57	21.34	24.42	80.78
2415465.5	6.26	0.5	12.43	238.33	19.57	22.01	24.45	81.22
2415466.5	6.30	0.5	12.34	238.15	19.57	22.68	24.48	81.66
2415467.5	6.35	-0.5	12.25	237.98	+19.58	+23.32	+24.51	82.09

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2415407.5	0.963	22.29	0.45	287.90	18.01	156.17	156.16	13 56.1	13 56.2
2415408.5	0.964	21.72	0.43	287.65	17.93	147.21	147.20	14 32.8	14 32.9
2415409.5	0.966	21.14	0.41	287.38	17.85	138.27	138.26	15 09.5	15 09.5
2415410.5	0.968	20.55	0.39	287.10	17.76	129.35	129.34	15 46.0	15 46.1
2415411.5	0.970	19.94	0.37	286.80	17.67	120.43	120.42	16 22.5	16 22.6
2415412.5	0.972	19.32	0.35	286.47	17.56	111.54	111.52	16 59.0	16 59.1
2415413.5	0.974	18.69	0.33	286.12	17.45	102.65	102.64	17 35.4	17 35.5
2415414.5	0.975	18.05	0.31	285.74	17.33	93.78	93.77	18 11.8	18 11.8
2415415.5	0.977	17.40	0.29	285.34	17.20	84.92	84.91	18 48.0	18 48.1
2415416.5	0.979	16.73	0.27	284.89	17.06	76.07	76.06	19 24.3	19 24.3
2415417.5	0.981	16.05	0.25	284.41	16.92	67.24	67.23	20 00.5	20 00.5
2415418.5	0.982	15.36	0.23	283.89	16.77	58.42	58.40	20 36.6	20 36.6
2415419.5	0.984	14.67	0.21	283.31	16.61	49.61	49.59	21 12.7	21 12.7
2415420.5	0.985	13.96	0.19	282.68	16.45	40.81	40.80	21 48.7	21 48.8
2415421.5	0.987	13.24	0.18	281.97	16.28	32.02	32.01	22 24.7	22 24.8
2415422.5	0.988	12.52	0.16	281.19	16.10	23.24	23.23	23 00.6	23 00.7
2415423.5	0.989	11.78	0.14	280.31	15.91	14.48	14.47	23 36.5	23 36.6
2415424.5	0.991	11.04	0.12	279.31	15.72	5.72	5.71	.. .. .	.. .. .
2415425.5	0.992	10.30	0.11	278.18	15.53	356.97	356.96	0 12.4	0 12.5
2415426.5	0.993	9.55	0.09	276.86	15.33	348.24	348.22	0 48.2	0 48.3
2415427.5	0.994	8.79	0.08	275.33	15.12	339.51	339.49	1 24.0	1 24.1
2415428.5	0.995	8.04	0.07	273.51	14.90	330.78	330.77	1 59.8	1 59.8
2415429.5	0.996	7.29	0.06	271.32	14.69	322.07	322.06	2 35.5	2 35.5
2415430.5	0.997	6.54	0.04	268.64	14.46	313.36	313.35	3 11.2	3 11.2
2415431.5	0.997	5.80	0.04	265.29	14.24	304.65	304.64	3 46.9	3 46.9
2415432.5	0.998	5.09	0.03	260.99	14.01	295.95	295.94	4 22.5	4 22.6
2415433.5	0.999	4.40	0.02	255.33	13.77	287.26	287.25	4 58.2	4 58.2
2415434.5	0.999	3.77	0.01	247.71	13.54	278.57	278.56	5 33.8	5 33.8
2415435.5	0.999	3.23	0.01	237.31	13.30	269.88	269.87	6 09.4	6 09.4
2415436.5	0.999	2.83	0.01	223.37	13.06	261.19	261.18	6 45.0	6 45.1
2415437.5	0.999	2.63	0.01	206.19	12.81	252.50	252.49	7 20.6	7 20.7
2415438.5	0.999	2.69	0.01	188.11	12.57	243.82	243.80	7 56.2	7 56.3
2415439.5	0.999	2.99	0.01	172.25	12.33	235.13	235.12	8 31.8	8 31.9
2415440.5	0.999	3.46	0.01	159.97	12.08	226.44	226.43	9 07.5	9 07.5
2415441.5	0.999	4.05	0.02	150.94	11.84	217.74	217.73	9 43.1	9 43.2
2415442.5	0.998	4.71	0.02	144.29	11.60	209.05	209.04	10 18.8	10 18.8
2415443.5	0.998	5.42	0.03	139.30	11.35	200.35	200.34	10 54.4	10 54.5
2415444.5	0.997	6.14	0.04	135.46	11.11	191.64	191.63	11 30.1	11 30.2
2415445.5	0.996	6.89	0.05	132.42	10.88	182.93	182.92	12 05.8	12 05.9
2415446.5	0.996	7.64	0.06	129.97	10.64	174.21	174.20	12 41.6	12 41.6
2415447.5	0.995	8.40	0.07	127.94	10.41	165.49	165.48	13 17.4	13 17.4
2415448.5	0.994	9.15	0.09	126.24	10.18	156.76	156.75	13 53.2	13 53.2
2415449.5	0.993	9.91	0.10	124.79	9.96	148.02	148.01	14 29.0	14 29.1
2415450.5	0.991	10.67	0.12	123.54	9.74	139.27	139.26	15 04.9	15 05.0
2415451.5	0.990	11.41	0.13	122.45	9.53	130.52	130.50	15 40.8	15 40.9
2415452.5	0.989	12.16	0.15	121.48	9.32	121.75	121.74	16 16.8	16 16.9
2415453.5	0.987	12.89	0.17	120.62	9.11	112.97	112.96	16 52.8	16 52.9
2415454.5	0.986	13.62	0.19	119.85	8.91	104.19	104.17	17 28.9	17 28.9
2415455.5	0.984	14.34	0.21	119.16	8.72	95.39	95.38	18 05.0	18 05.1
2415456.5	0.983	15.05	0.23	118.52	8.53	86.58	86.57	18 41.2	18 41.2
2415457.5	0.981	15.76	0.25	117.94	8.35	77.76	77.74	19 17.4	19 17.4
2415458.5	0.980	16.45	0.27	117.41	8.18	68.92	68.91	19 53.6	19 53.7
2415459.5	0.978	17.13	0.29	116.93	8.02	60.08	60.07	20 30.0	20 30.0
2415460.5	0.976	17.80	0.31	116.48	7.86	51.22	51.21	21 06.3	21 06.4
2415461.5	0.974	18.46	0.33	116.06	7.71	42.35	42.34	21 42.8	21 42.8
2415462.5	0.972	19.10	0.35	115.67	7.56	33.46	33.45	22 19.2	22 19.3
2415463.5	0.971	19.74	0.37	115.31	7.43	24.57	24.55	22 55.8	22 55.8
2415464.5	0.969	20.36	0.39	114.97	7.30	15.65	15.64	23 32.4	23 32.4
2415465.5	0.967	20.97	0.41	114.65	7.18	6.73	6.72	.. .. .	.. .. .
2415466.5	0.965	21.57	0.43	114.36	7.07	357.79	357.78	0 09.1	0 09.1
2415467.5	0.963	22.15	0.45	114.08	6.96	348.84	348.83	0 45.8	0 45.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2416172.5	6.34	-0.5	12.27	293.47	+20.62	-23.44	+24.76	90.03
2416173.5	6.28	0.5	12.38	293.35	20.64	22.83	24.76	90.47
2416174.5	6.23	0.5	12.48	293.21	20.65	22.21	24.76	90.91
2416175.5	6.18	0.6	12.59	293.06	20.67	21.57	24.76	91.35
2416176.5	6.13	0.6	12.69	292.90	20.69	20.92	24.75	91.80
2416177.5	6.08	-0.6	12.80	292.73	+20.72	-20.26	+24.74	92.24
2416178.5	6.03	0.6	12.90	292.54	20.74	19.58	24.73	92.68
2416179.5	5.98	0.7	13.00	292.34	20.77	18.89	24.72	93.13
2416180.5	5.94	0.7	13.10	292.12	20.81	18.19	24.71	93.57
2416181.5	5.89	0.7	13.20	291.89	20.84	17.48	24.70	94.01
2416182.5	5.85	-0.7	13.30	291.65	+20.88	-16.75	+24.68	94.46
2416183.5	5.81	0.8	13.39	291.40	20.92	16.01	24.67	94.90
2416184.5	5.77	0.8	13.49	291.14	20.97	15.25	24.65	95.35
2416185.5	5.73	0.8	13.58	290.86	21.02	14.49	24.63	95.79
2416186.5	5.69	0.8	13.67	290.57	21.07	13.71	24.61	96.24
2416187.5	5.66	-0.9	13.75	290.27	+21.12	-12.92	+24.58	96.68
2416188.5	5.62	0.9	13.83	289.96	21.17	12.12	24.56	97.13
2416189.5	5.59	0.9	13.91	289.64	21.23	11.31	24.53	97.58
2416190.5	5.56	0.9	13.99	289.31	21.29	10.49	24.50	98.02
2416191.5	5.53	1.0	14.06	288.97	21.35	9.66	24.47	98.47
2416192.5	5.50	-1.0	14.13	288.62	+21.41	- 8.81	+24.44	98.92
2416193.5	5.48	1.0	14.20	288.26	21.48	7.97	24.41	99.37
2416194.5	5.45	1.0	14.26	287.89	21.54	7.11	24.38	99.81
2416195.5	5.43	1.1	14.32	287.52	21.61	6.24	24.34	100.26
2416196.5	5.41	1.1	14.38	287.13	21.68	5.37	24.30	100.71
2416197.5	5.39	-1.1	14.43	286.74	+21.75	- 4.49	+24.26	101.16
2416198.5	5.37	1.1	14.47	286.35	21.82	3.60	24.22	101.61
2416199.5	5.36	1.1	14.51	285.95	21.89	2.71	24.18	102.06
2416200.5	5.35	1.1	14.55	285.55	21.97	1.82	24.14	102.51
2416201.5	5.33	1.2	14.58	285.14	22.04	0.92	24.09	102.96
2416202.5	5.32	-1.2	14.61	284.73	+22.11	- 0.02	+24.04	103.41
2416203.5	5.32	1.2	14.63	284.32	22.19	+ 0.89	24.00	103.86
2416204.5	5.31	1.2	14.65	283.91	22.26	1.79	23.95	104.31
2416205.5	5.30	1.2	14.66	283.49	22.34	2.69	23.89	104.77
2416206.5	5.30	1.2	14.67	283.08	22.41	3.60	23.84	105.22
2416207.5	5.30	-1.1	14.67	282.67	+22.49	+ 4.50	+23.78	105.67
2416208.5	5.30	1.1	14.67	282.26	22.56	5.40	23.73	106.13
2416209.5	5.30	1.1	14.66	281.86	22.64	6.29	23.67	106.58
2416210.5	5.31	1.1	14.65	281.46	22.71	7.19	23.61	107.03
2416211.5	5.32	1.1	14.63	281.06	22.78	8.08	23.55	107.49
2416212.5	5.32	-1.1	14.61	280.67	+22.86	+ 8.96	+23.48	107.94
2416213.5	5.33	1.1	14.58	280.28	22.93	9.83	23.42	108.40
2416214.5	5.34	1.1	14.55	279.90	23.00	10.70	23.35	108.85
2416215.5	5.36	1.0	14.52	279.53	23.07	11.57	23.28	109.31
2416216.5	5.37	1.0	14.48	279.17	23.14	12.42	23.21	109.77
2416217.5	5.39	-1.0	14.44	278.81	+23.21	+13.27	+23.14	110.22
2416218.5	5.40	1.0	14.39	278.47	23.27	14.11	23.07	110.68
2416219.5	5.42	1.0	14.34	278.13	23.34	14.93	23.00	111.14
2416220.5	5.44	1.0	14.29	277.81	23.41	15.75	22.92	111.60
2416221.5	5.47	0.9	14.23	277.49	23.47	16.55	22.84	112.06
2416222.5	5.49	-0.9	14.17	277.19	+23.54	+17.35	+22.76	112.52
2416223.5	5.52	0.9	14.10	276.90	23.60	18.13	22.68	112.98
2416224.5	5.54	0.9	14.04	276.62	23.66	18.90	22.60	113.44
2416225.5	5.57	0.9	13.97	276.35	23.72	19.66	22.52	113.90
2416226.5	5.60	0.8	13.90	276.10	23.78	20.41	22.43	114.36
2416227.5	5.63	-0.8	13.82	275.85	+23.84	+21.14	+22.34	114.82
2416228.5	5.66	0.8	13.74	275.63	23.90	21.86	22.25	115.29
2416229.5	5.69	0.8	13.66	275.41	23.95	22.57	22.16	115.75
2416230.5	5.73	0.8	13.58	275.21	24.01	23.26	22.07	116.21
2416231.5	5.76	0.7	13.50	275.02	24.06	23.93	21.98	116.68
2416232.5	5.80	-0.7	13.42	274.85	+24.12	+24.60	+21.88	117.14

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2416172.5	0.964	21.98	0.45	288.44	33.71	352.19	352.19	0 32.0	0 32.0
2416173.5	0.965	21.43	0.43	288.27	33.67	343.22	343.22	1 08.8	1 08.8
2416174.5	0.967	20.86	0.41	288.09	33.63	334.26	334.26	1 45.6	1 45.6
2416175.5	0.969	20.28	0.39	287.91	33.59	325.31	325.31	2 22.3	2 22.3
2416176.5	0.971	19.69	0.37	287.71	33.54	316.38	316.38	2 58.9	2 58.9
2416177.5	0.973	19.09	0.35	287.49	33.48	307.46	307.45	3 35.5	3 35.5
2416178.5	0.974	18.47	0.33	287.26	33.42	298.55	298.55	4 12.0	4 12.0
2416179.5	0.976	17.84	0.31	287.02	33.36	289.65	289.65	4 48.5	4 48.5
2416180.5	0.978	17.20	0.29	286.75	33.29	280.77	280.77	5 24.9	5 24.9
2416181.5	0.979	16.55	0.27	286.46	33.22	271.90	271.90	6 01.3	6 01.3
2416182.5	0.981	15.88	0.25	286.15	33.15	263.04	263.04	6 37.6	6 37.6
2416183.5	0.982	15.21	0.23	285.80	33.07	254.20	254.20	7 13.9	7 13.9
2416184.5	0.984	14.52	0.22	285.43	32.98	245.36	245.36	7 50.1	7 50.1
2416185.5	0.986	13.82	0.20	285.01	32.89	236.54	236.54	8 26.2	8 26.2
2416186.5	0.987	13.11	0.18	284.54	32.80	227.73	227.73	9 02.3	9 02.3
2416187.5	0.988	12.39	0.16	284.01	32.70	218.93	218.93	9 38.4	9 38.4
2416188.5	0.990	11.66	0.14	283.42	32.60	210.14	210.14	10 14.4	10 14.4
2416189.5	0.991	10.92	0.13	282.74	32.49	201.36	201.36	10 50.4	10 50.4
2416190.5	0.992	10.17	0.11	281.96	32.38	192.59	192.59	11 26.3	11 26.3
2416191.5	0.993	9.42	0.09	281.05	32.26	183.83	183.83	12 02.2	12 02.2
2416192.5	0.994	8.66	0.08	279.97	32.14	175.08	175.08	12 38.1	12 38.1
2416193.5	0.995	7.89	0.07	278.67	32.02	166.34	166.34	13 13.9	13 13.9
2416194.5	0.996	7.12	0.06	277.10	31.89	157.61	157.60	13 49.7	13 49.7
2416195.5	0.997	6.35	0.04	275.12	31.76	148.88	148.88	14 25.5	14 25.5
2416196.5	0.998	5.59	0.03	272.60	31.62	140.16	140.16	15 01.2	15 01.2
2416197.5	0.998	4.83	0.03	269.26	31.48	131.44	131.44	15 36.9	15 36.9
2416198.5	0.999	4.09	0.02	264.68	31.34	122.73	122.73	16 12.6	16 12.6
2416199.5	0.999	3.38	0.01	258.10	31.20	114.03	114.03	16 48.3	16 48.3
2416200.5	0.999	2.74	0.01	248.21	31.05	105.33	105.33	17 23.9	17 23.9
2416201.5	1.000	2.22	0.01	232.98	30.90	96.63	96.63	17 59.6	17 59.6
2416202.5	1.000	1.93	0.00	211.05	30.74	87.93	87.93	18 35.2	18 35.2
2416203.5	1.000	1.98	0.00	186.34	30.59	79.24	79.24	19 10.8	19 10.8
2416204.5	1.000	2.36	0.01	166.28	30.43	70.55	70.55	19 46.5	19 46.5
2416205.5	0.999	2.93	0.01	152.83	30.27	61.85	61.85	20 22.1	20 22.1
2416206.5	0.999	3.61	0.01	144.09	30.12	53.16	53.16	20 57.8	20 57.8
2416207.5	0.999	4.34	0.02	138.19	29.96	44.46	44.46	21 33.4	21 33.4
2416208.5	0.998	5.10	0.03	134.03	29.80	35.76	35.76	22 09.1	22 09.1
2416209.5	0.997	5.88	0.04	130.96	29.64	27.06	27.05	22 44.8	22 44.8
2416210.5	0.997	6.67	0.05	128.61	29.48	18.35	18.35	23 20.5	23 20.5
2416211.5	0.996	7.47	0.06	126.76	29.32	9.63	9.63	23 56.2	23 56.2
2416212.5	0.995	8.26	0.08	125.27	29.16	0.92	0.92	.. .. .	.. .. .
2416213.5	0.994	9.06	0.09	124.04	29.00	352.19	352.19	0 32.0	0 32.0
2416214.5	0.993	9.85	0.11	123.00	28.85	343.46	343.46	1 07.8	1 07.8
2416215.5	0.991	10.64	0.12	122.13	28.69	334.72	334.72	1 43.6	1 43.6
2416216.5	0.990	11.42	0.14	121.37	28.54	325.97	325.97	2 19.5	2 19.5
2416217.5	0.989	12.20	0.16	120.72	28.39	317.21	317.21	2 55.4	2 55.4
2416218.5	0.987	12.97	0.18	120.14	28.25	308.45	308.45	3 31.4	3 31.4
2416219.5	0.986	13.73	0.20	119.62	28.11	299.67	299.67	4 07.4	4 07.4
2416220.5	0.984	14.49	0.23	119.17	27.97	290.88	290.88	4 43.4	4 43.4
2416221.5	0.982	15.23	0.25	118.76	27.83	282.08	282.08	5 19.5	5 19.5
2416222.5	0.981	15.97	0.27	118.38	27.70	273.27	273.27	5 55.6	5 55.6
2416223.5	0.979	16.69	0.30	118.05	27.58	264.45	264.45	6 31.8	6 31.8
2416224.5	0.977	17.41	0.32	117.74	27.45	255.62	255.62	7 08.1	7 08.1
2416225.5	0.975	18.11	0.35	117.46	27.34	246.77	246.77	7 44.4	7 44.4
2416226.5	0.973	18.81	0.37	117.20	27.23	237.91	237.91	8 20.7	8 20.7
2416227.5	0.971	19.49	0.40	116.96	27.12	229.03	229.03	8 57.1	8 57.1
2416228.5	0.969	20.16	0.42	116.74	27.02	220.15	220.15	9 33.6	9 33.6
2416229.5	0.967	20.82	0.45	116.53	26.92	211.25	211.25	10 10.1	10 10.1
2416230.5	0.965	21.47	0.47	116.34	26.83	202.33	202.33	10 46.7	10 46.7
2416231.5	0.963	22.11	0.50	116.16	26.75	193.40	193.40	11 23.4	11 23.4
2416232.5	0.961	22.73	0.52	115.99	26.67	184.46	184.46	12 00.1	12 00.1

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2416944.5	5.53	-0.9	14.06	332.69	+10.43	-20.99	+19.00	128.98
2416945.5	5.48	0.9	14.20	332.63	10.49	20.43	18.87	129.46
2416946.5	5.43	0.9	14.33	332.55	10.55	19.86	18.73	129.94
2416947.5	5.38	0.9	14.47	332.46	10.62	19.29	18.59	130.43
2416948.5	5.33	1.0	14.60	332.35	10.69	18.69	18.46	130.91
2416949.5	5.28	-1.0	14.74	332.24	+10.77	-18.09	+18.31	131.39
2416950.5	5.23	1.0	14.87	332.11	10.86	17.48	18.17	131.88
2416951.5	5.18	1.1	15.00	331.98	10.95	16.86	18.03	132.36
2416952.5	5.14	1.1	15.14	331.83	11.05	16.22	17.88	132.85
2416953.5	5.09	1.1	15.27	331.67	11.15	15.57	17.74	133.33
2416954.5	5.05	-1.2	15.39	331.50	+11.26	-14.92	+17.59	133.82
2416955.5	5.01	1.2	15.52	331.32	11.37	14.25	17.44	134.31
2416956.5	4.97	1.2	15.64	331.13	11.49	13.57	17.29	134.80
2416957.5	4.93	1.2	15.77	330.92	11.61	12.88	17.14	135.29
2416958.5	4.90	1.3	15.88	330.71	11.74	12.18	16.99	135.78
2416959.5	4.86	-1.3	16.00	330.49	+11.88	-11.47	+16.83	136.27
2416960.5	4.83	1.3	16.11	330.25	12.02	10.75	16.68	136.76
2416961.5	4.79	1.4	16.23	330.01	12.16	10.02	16.52	137.25
2416962.5	4.76	1.4	16.33	329.76	12.31	9.28	16.36	137.75
2416963.5	4.73	1.4	16.44	329.49	12.46	8.53	16.20	138.24
2416964.5	4.70	-1.4	16.53	329.22	+12.62	- 7.77	+16.04	138.73
2416965.5	4.68	1.5	16.63	328.95	12.78	7.01	15.87	139.23
2416966.5	4.65	1.5	16.72	328.66	12.94	6.23	15.71	139.73
2416967.5	4.63	1.5	16.81	328.37	13.11	5.45	15.55	140.22
2416968.5	4.61	1.5	16.89	328.07	13.28	4.67	15.38	140.72
2416969.5	4.58	-1.6	16.96	327.76	+13.45	- 3.87	+15.21	141.22
2416970.5	4.56	1.6	17.03	327.45	13.62	3.08	15.04	141.72
2416971.5	4.55	1.6	17.10	327.13	13.80	2.27	14.87	142.22
2416972.5	4.53	1.6	17.16	326.81	13.98	1.47	14.70	142.72
2416973.5	4.52	1.7	17.22	326.49	14.15	- 0.65	14.52	143.22
2416974.5	4.50	-1.7	17.26	326.16	+14.33	+ 0.16	+14.35	143.72
2416975.5	4.49	1.7	17.31	325.83	14.51	0.97	14.17	144.23
2416976.5	4.48	1.7	17.34	325.50	14.69	1.79	14.00	144.73
2416977.5	4.48	1.7	17.38	325.17	14.87	2.61	13.82	145.24
2416978.5	4.47	1.6	17.40	324.84	15.05	3.43	13.64	145.74
2416979.5	4.46	-1.6	17.42	324.51	+15.23	+ 4.24	+13.46	146.25
2416980.5	4.46	1.6	17.43	324.18	15.41	5.06	13.28	146.76
2416981.5	4.46	1.6	17.44	323.85	15.58	5.87	13.09	147.26
2416982.5	4.46	1.6	17.44	323.53	15.76	6.68	12.91	147.77
2416983.5	4.46	1.6	17.44	323.21	15.93	7.49	12.72	148.28
2416984.5	4.46	-1.6	17.43	322.90	+16.10	+ 8.29	+12.53	148.79
2416985.5	4.47	1.6	17.41	322.59	16.26	9.09	12.35	149.31
2416986.5	4.47	1.6	17.39	322.28	16.43	9.88	12.16	149.82
2416987.5	4.48	1.5	17.37	321.98	16.59	10.67	11.97	150.33
2416988.5	4.49	1.5	17.33	321.69	16.74	11.45	11.77	150.85
2416989.5	4.50	-1.5	17.30	321.40	+16.90	+12.22	+11.58	151.36
2416990.5	4.51	1.5	17.25	321.13	17.05	12.99	11.39	151.88
2416991.5	4.52	1.5	17.21	320.86	17.19	13.74	11.19	152.39
2416992.5	4.53	1.5	17.15	320.60	17.33	14.49	11.00	152.91
2416993.5	4.55	1.4	17.10	320.34	17.47	15.23	10.80	153.43
2416994.5	4.56	-1.4	17.04	320.10	+17.60	+15.96	+10.60	153.95
2416995.5	4.58	1.4	16.97	319.87	17.73	16.68	10.40	154.47
2416996.5	4.60	1.4	16.90	319.65	17.85	17.39	10.20	154.99
2416997.5	4.62	1.4	16.83	319.45	17.97	18.09	10.00	155.51
2416998.5	4.64	1.4	16.75	319.25	18.08	18.77	9.79	156.04
2416999.5	4.66	-1.3	16.67	319.06	+18.19	+19.45	+ 9.59	156.56
2417000.5	4.69	1.3	16.59	318.89	18.29	20.11	9.39	157.08
2417001.5	4.71	1.3	16.51	318.73	18.39	20.76	9.18	157.61
2417002.5	4.74	1.3	16.42	318.58	18.48	21.40	8.97	158.14
2417003.5	4.76	1.3	16.33	318.45	18.56	22.02	8.77	158.66
2417004.5	4.79	-1.2	16.23	318.33	+18.64	+22.63	+ 8.56	159.19

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.		Time of Transit of Zero Meridian U.T.	
		°	″	°	°	°	°	h	m	h	m
2416944.5	0.964	22.00	0.51	282.27	37.62	121.76	121.77	16	17.5	16	17.4
2416945.5	0.965	21.44	0.49	282.27	37.63	112.73	112.74	16	54.5	16	54.4
2416946.5	0.967	20.86	0.47	282.28	37.65	103.71	103.72	17	31.5	17	31.4
2416947.5	0.969	20.27	0.45	282.28	37.67	94.71	94.72	18	08.4	18	08.3
2416948.5	0.971	19.66	0.43	282.29	37.69	85.71	85.73	18	45.2	18	45.2
2416949.5	0.973	19.05	0.40	282.31	37.71	76.73	76.74	19	22.0	19	22.0
2416950.5	0.974	18.41	0.38	282.33	37.74	67.76	67.77	19	58.8	19	58.7
2416951.5	0.976	17.77	0.36	282.35	37.76	58.80	58.81	20	35.5	20	35.5
2416952.5	0.978	17.11	0.34	282.38	37.79	49.85	49.86	21	12.2	21	12.1
2416953.5	0.980	16.44	0.31	282.41	37.82	40.91	40.93	21	48.8	21	48.8
2416954.5	0.981	15.76	0.29	282.44	37.85	31.99	32.00	22	25.4	22	25.3
2416955.5	0.983	15.06	0.27	282.47	37.88	23.07	23.08	23	01.9	23	01.9
2416956.5	0.984	14.35	0.24	282.51	37.91	14.16	14.18	23	38.4	23	38.3
2416957.5	0.986	13.63	0.22	282.55	37.95	5.27	5.28	..	.. .	..	.. .
2416958.5	0.987	12.90	0.20	282.59	37.98	356.38	356.39	0	14.8	0	14.8
2416959.5	0.989	12.15	0.18	282.64	38.02	347.51	347.52	0	51.2	0	51.2
2416960.5	0.990	11.40	0.16	282.68	38.05	338.64	338.65	1	27.6	1	27.5
2416961.5	0.991	10.63	0.14	282.73	38.09	329.78	329.80	2	03.9	2	03.9
2416962.5	0.993	9.85	0.12	282.77	38.13	320.94	320.95	2	40.2	2	40.1
2416963.5	0.994	9.06	0.10	282.81	38.16	312.10	312.11	3	16.4	3	16.4
2416964.5	0.995	8.26	0.09	282.85	38.20	303.27	303.28	3	52.6	3	52.6
2416965.5	0.996	7.46	0.07	282.87	38.24	294.44	294.46	4	28.8	4	28.8
2416966.5	0.997	6.64	0.06	282.89	38.27	285.63	285.64	5	04.9	5	04.9
2416967.5	0.997	5.81	0.04	282.89	38.31	276.82	276.83	5	41.1	5	41.0
2416968.5	0.998	4.98	0.03	282.85	38.35	268.02	268.03	6	17.1	6	17.1
2416969.5	0.999	4.14	0.02	282.77	38.38	259.22	259.23	6	53.2	6	53.2
2416970.5	0.999	3.30	0.01	282.59	38.42	250.43	250.44	7	29.3	7	29.2
2416971.5	1.000	2.44	0.01	282.23	38.45	241.64	241.65	8	05.3	8	05.2
2416972.5	1.000	1.59	0.00	281.35	38.48	232.86	232.87	8	41.3	8	41.2
2416973.5	1.000	0.73	0.00	278.17	38.51	224.08	224.09	9	17.3	9	17.2
2416974.5	1.000	0.16	0.00	133.62	38.54	215.30	215.31	9	53.3	9	53.2
2416975.5	1.000	1.01	0.00	108.85	38.57	206.52	206.53	10	29.2	10	29.2
2416976.5	1.000	1.87	0.00	106.92	38.59	197.75	197.76	11	05.2	11	05.2
2416977.5	0.999	2.74	0.01	106.27	38.62	188.97	188.98	11	41.2	11	41.2
2416978.5	0.999	3.61	0.02	105.99	38.64	180.20	180.21	12	17.2	12	17.1
2416979.5	0.998	4.48	0.03	105.86	38.66	171.42	171.43	12	53.2	12	53.1
2416980.5	0.998	5.35	0.04	105.80	38.68	162.64	162.65	13	29.2	13	29.1
2416981.5	0.997	6.21	0.05	105.79	38.70	153.86	153.87	14	05.2	14	05.1
2416982.5	0.996	7.08	0.07	105.81	38.72	145.07	145.09	14	41.2	14	41.2
2416983.5	0.995	7.93	0.08	105.85	38.73	136.29	136.30	15	17.3	15	17.2
2416984.5	0.994	8.79	0.10	105.90	38.75	127.49	127.50	15	53.3	15	53.3
2416985.5	0.993	9.64	0.12	105.95	38.76	118.69	118.71	16	29.4	16	29.4
2416986.5	0.992	10.49	0.15	106.01	38.77	109.89	109.90	17	05.5	17	05.5
2416987.5	0.990	11.32	0.17	106.08	38.78	101.08	101.09	17	41.7	17	41.6
2416988.5	0.989	12.16	0.19	106.15	38.79	92.26	92.27	18	17.9	18	17.8
2416989.5	0.987	12.98	0.22	106.22	38.80	83.44	83.45	18	54.1	18	54.0
2416990.5	0.986	13.80	0.25	106.29	38.80	74.60	74.62	19	30.3	19	30.3
2416991.5	0.984	14.61	0.28	106.37	38.80	65.76	65.77	20	06.6	20	06.6
2416992.5	0.982	15.41	0.31	106.44	38.81	56.91	56.92	20	42.9	20	42.9
2416993.5	0.980	16.20	0.34	106.51	38.81	48.05	48.06	21	19.3	21	19.3
2416994.5	0.978	16.98	0.37	106.58	38.81	39.18	39.19	21	55.7	21	55.7
2416995.5	0.976	17.75	0.40	106.65	38.81	30.30	30.31	22	32.2	22	32.2
2416996.5	0.974	18.51	0.44	106.72	38.81	21.40	21.42	23	08.7	23	08.7
2416997.5	0.972	19.26	0.47	106.79	38.81	12.50	12.51	23	45.3	23	45.3
2416998.5	0.970	20.00	0.51	106.86	38.81	3.58	3.60	..	.. .	..	.. .
2416999.5	0.968	20.72	0.54	106.92	38.81	354.66	354.67	0	21.9	0	21.9
2417000.5	0.965	21.44	0.57	106.98	38.81	345.71	345.73	0	58.6	0	58.6
2417001.5	0.963	22.14	0.61	107.04	38.81	336.76	336.77	1	35.3	1	35.3
2417002.5	0.961	22.83	0.64	107.09	38.81	327.79	327.80	2	12.1	2	12.1
2417003.5	0.959	23.51	0.68	107.15	38.81	318.81	318.82	2	49.0	2	48.9
2417004.5	0.956	24.17	0.71	107.20	38.81	309.82	309.83	3	25.9	3	25.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2417732.5	4.22	-1.6	18.42	23.59	- 8.75	-22.08	- 0.70	181.66
2417733.5	4.18	1.6	18.61	23.60	8.68	21.58	0.93	182.23
2417734.5	4.14	1.7	18.79	23.61	8.60	21.06	1.17	182.80
2417735.5	4.10	1.7	18.98	23.60	8.51	20.53	1.41	183.37
2417736.5	4.06	1.7	19.16	23.58	8.43	20.00	1.65	183.94
2417737.5	4.02	-1.8	19.35	23.54	- 8.33	-19.44	- 1.89	184.51
2417738.5	3.98	1.8	19.53	23.50	8.23	18.88	2.13	185.09
2417739.5	3.95	1.8	19.71	23.45	8.13	18.30	2.37	185.66
2417740.5	3.91	1.9	19.89	23.38	8.02	17.71	2.61	186.23
2417741.5	3.88	1.9	20.07	23.30	7.91	17.11	2.85	186.81
2417742.5	3.84	-1.9	20.24	23.21	- 7.79	-16.50	- 3.09	187.39
2417743.5	3.81	1.9	20.41	23.11	7.66	15.87	3.33	187.96
2417744.5	3.78	2.0	20.58	23.00	7.54	15.24	3.57	188.54
2417745.5	3.75	2.0	20.74	22.88	7.41	14.59	3.81	189.12
2417746.5	3.72	2.0	20.90	22.75	7.27	13.93	4.05	189.70
2417747.5	3.69	-2.1	21.06	22.61	- 7.13	-13.26	- 4.29	190.28
2417748.5	3.67	2.1	21.21	22.46	6.99	12.57	4.53	190.87
2417749.5	3.64	2.1	21.36	22.30	6.84	11.88	4.77	191.45
2417750.5	3.62	2.1	21.51	22.13	6.69	11.18	5.01	192.03
2417751.5	3.59	2.2	21.64	21.95	6.54	10.46	5.25	192.62
2417752.5	3.57	-2.2	21.78	21.77	- 6.38	- 9.74	- 5.49	193.20
2417753.5	3.55	2.2	21.90	21.57	6.22	9.01	5.73	193.79
2417754.5	3.53	2.2	22.03	21.37	6.06	8.27	5.97	194.38
2417755.5	3.51	2.3	22.14	21.16	5.90	7.52	6.21	194.97
2417756.5	3.50	2.3	22.25	20.94	5.74	6.76	6.45	195.55
2417757.5	3.48	-2.3	22.35	20.72	- 5.57	- 5.99	- 6.69	196.14
2417758.5	3.47	2.3	22.44	20.49	5.41	5.22	6.93	196.74
2417759.5	3.45	2.4	22.53	20.26	5.24	4.44	7.17	197.33
2417760.5	3.44	2.4	22.61	20.02	5.07	3.66	7.40	197.92
2417761.5	3.43	2.4	22.68	19.78	4.91	2.87	7.64	198.51
2417762.5	3.42	-2.4	22.75	19.54	- 4.74	- 2.07	- 7.88	199.11
2417763.5	3.41	2.4	22.80	19.29	4.58	1.27	8.12	199.70
2417764.5	3.40	2.4	22.85	19.04	4.42	- 0.47	8.36	200.30
2417765.5	3.40	2.4	22.89	18.79	4.25	+ 0.33	8.59	200.90
2417766.5	3.39	2.4	22.92	18.54	4.09	1.14	8.83	201.49
2417767.5	3.39	-2.4	22.94	18.28	- 3.94	+ 1.95	- 9.06	202.09
2417768.5	3.39	2.4	22.96	18.03	3.78	2.76	9.30	202.69
2417769.5	3.39	2.4	22.96	17.79	3.63	3.57	9.53	203.29
2417770.5	3.39	2.4	22.96	17.54	3.48	4.38	9.77	203.89
2417771.5	3.39	2.4	22.95	17.30	3.34	5.18	10.00	204.50
2417772.5	3.39	-2.4	22.93	17.06	- 3.20	+ 5.99	-10.23	205.10
2417773.5	3.40	2.3	22.91	16.82	3.07	6.79	10.47	205.70
2417774.5	3.40	2.3	22.87	16.59	2.94	7.59	10.70	206.31
2417775.5	3.41	2.3	22.83	16.37	2.81	8.38	10.93	206.91
2417776.5	3.41	2.3	22.78	16.15	2.70	9.17	11.16	207.52
2417777.5	3.42	-2.3	22.72	15.94	- 2.58	+ 9.95	-11.39	208.12
2417778.5	3.43	2.3	22.66	15.73	2.48	10.73	11.62	208.73
2417779.5	3.44	2.2	22.59	15.53	2.37	11.50	11.84	209.34
2417780.5	3.45	2.2	22.51	15.35	2.28	12.27	12.07	209.95
2417781.5	3.47	2.2	22.42	15.17	2.19	13.03	12.30	210.56
2417782.5	3.48	-2.2	22.34	14.99	- 2.11	+13.78	-12.52	211.17
2417783.5	3.50	2.2	22.24	14.83	2.04	14.53	12.74	211.78
2417784.5	3.51	2.1	22.14	14.68	1.97	15.26	12.97	212.39
2417785.5	3.53	2.1	22.03	14.54	1.91	15.99	13.19	213.00
2417786.5	3.55	2.1	21.92	14.40	1.85	16.71	13.41	213.62
2417787.5	3.57	-2.1	21.81	14.28	- 1.81	+17.43	-13.63	214.23
2417788.5	3.59	2.1	21.69	14.17	1.77	18.13	13.85	214.84
2417789.5	3.61	2.0	21.56	14.07	1.74	18.82	14.06	215.46
2417790.5	3.63	2.0	21.43	13.98	1.71	19.51	14.28	216.07
2417791.5	3.65	2.0	21.30	13.90	1.69	20.18	14.49	216.69
2417792.5	3.67	-2.0	21.17	13.83	- 1.68	+20.85	-14.71	217.31

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2417732.5	0.959	23.41	0.76	266.38	15.31	94.05	94.07	18 11.4	18 11.3
2417733.5	0.961	22.83	0.73	266.66	15.31	84.93	84.96	18 48.8	18 48.7
2417734.5	0.963	22.24	0.70	266.96	15.32	75.83	75.86	19 26.1	19 26.0
2417735.5	0.965	21.64	0.67	267.29	15.34	66.74	66.77	20 03.4	20 03.3
2417736.5	0.967	21.03	0.64	267.65	15.36	57.67	57.69	20 40.6	20 40.5
2417737.5	0.969	20.40	0.61	268.04	15.39	48.60	48.62	21 17.7	21 17.6
2417738.5	0.971	19.76	0.58	268.47	15.43	39.54	39.57	21 54.9	21 54.8
2417739.5	0.972	19.11	0.54	268.93	15.48	30.50	30.52	22 31.9	22 31.8
2417740.5	0.974	18.44	0.51	269.43	15.53	21.47	21.49	23 08.9	23 08.8
2417741.5	0.976	17.77	0.48	269.99	15.59	12.44	12.47	23 45.9	23 45.8
2417742.5	0.978	17.08	0.45	270.59	15.66	3.43	3.46	.. .. ..	.. .. ..
2417743.5	0.980	16.38	0.41	271.25	15.74	354.43	354.46	0 22.8	0 22.7
2417744.5	0.981	15.67	0.38	271.98	15.82	345.44	345.47	0 59.7	0 59.6
2417745.5	0.983	14.95	0.35	272.78	15.91	336.46	336.49	1 36.6	1 36.5
2417746.5	0.985	14.23	0.32	273.68	16.01	327.49	327.52	2 13.3	2 13.2
2417747.5	0.986	13.49	0.29	274.67	16.11	318.53	318.56	2 50.1	2 50.0
2417748.5	0.988	12.75	0.26	275.79	16.22	309.58	309.61	3 26.8	3 26.7
2417749.5	0.989	12.00	0.23	277.04	16.34	300.64	300.66	4 03.5	4 03.4
2417750.5	0.990	11.24	0.21	278.47	16.46	291.71	291.73	4 40.1	4 40.0
2417751.5	0.992	10.49	0.18	280.10	16.59	282.78	282.81	5 16.7	5 16.6
2417752.5	0.993	9.73	0.16	281.98	16.73	273.87	273.89	5 53.3	5 53.2
2417753.5	0.994	8.97	0.13	284.19	16.87	264.96	264.98	6 29.8	6 29.7
2417754.5	0.995	8.22	0.11	286.79	17.01	256.06	256.08	7 06.3	7 06.2
2417755.5	0.996	7.48	0.09	289.92	17.16	247.16	247.19	7 42.8	7 42.7
2417756.5	0.997	6.76	0.08	293.71	17.31	238.28	238.30	8 19.2	8 19.1
2417757.5	0.997	6.06	0.06	298.39	17.47	229.39	229.42	8 55.6	8 55.5
2417758.5	0.998	5.41	0.05	304.23	17.63	220.52	220.54	9 32.0	9 31.9
2417759.5	0.998	4.82	0.04	311.59	17.79	211.65	211.67	10 08.4	10 08.3
2417760.5	0.999	4.32	0.03	320.82	17.96	202.78	202.80	10 44.8	10 44.7
2417761.5	0.999	3.95	0.03	332.11	18.13	193.91	193.94	11 21.1	11 21.0
2417762.5	0.999	3.75	0.02	345.14	18.30	185.05	185.08	11 57.4	11 57.3
2417763.5	0.999	3.76	0.02	358.88	18.47	176.20	176.22	12 33.8	12 33.7
2417764.5	0.999	3.97	0.03	11.91	18.65	167.34	167.36	13 10.1	13 10.0
2417765.5	0.999	4.35	0.03	23.19	18.82	158.48	158.51	13 46.4	13 46.3
2417766.5	0.998	4.87	0.04	32.41	18.99	149.63	149.65	14 22.7	14 22.6
2417767.5	0.998	5.48	0.05	39.76	19.17	140.77	140.80	14 59.0	14 58.9
2417768.5	0.997	6.16	0.07	45.61	19.34	131.91	131.94	15 35.4	15 35.3
2417769.5	0.996	6.88	0.08	50.30	19.51	123.05	123.08	16 11.7	16 11.6
2417770.5	0.996	7.64	0.10	54.12	19.67	114.19	114.22	16 48.1	16 48.0
2417771.5	0.995	8.42	0.12	57.27	19.84	105.33	105.35	17 24.4	17 24.3
2417772.5	0.994	9.21	0.15	59.91	20.00	96.46	96.48	18 00.8	18 00.7
2417773.5	0.992	10.01	0.17	62.15	20.16	87.59	87.61	18 37.2	18 37.1
2417774.5	0.991	10.81	0.20	64.07	20.31	78.71	78.73	19 13.6	19 13.5
2417775.5	0.990	11.62	0.23	65.75	20.46	69.82	69.85	19 50.1	19 50.0
2417776.5	0.988	12.42	0.27	67.23	20.61	60.93	60.95	20 26.6	20 26.5
2417777.5	0.987	13.23	0.30	68.53	20.75	52.03	52.06	21 03.1	21 03.0
2417778.5	0.985	14.03	0.34	69.70	20.88	43.13	43.15	21 39.7	21 39.6
2417779.5	0.983	14.82	0.38	70.75	21.01	34.21	34.24	22 16.3	22 16.2
2417780.5	0.982	15.61	0.42	71.71	21.14	25.29	25.31	22 52.9	22 52.8
2417781.5	0.980	16.39	0.46	72.57	21.25	16.36	16.38	23 29.6	23 29.5
2417782.5	0.978	17.17	0.50	73.37	21.36	7.42	7.44	.. .. ..	.. .. ..
2417783.5	0.976	17.93	0.54	74.09	21.47	358.47	358.49	0 06.3	0 06.2
2417784.5	0.974	18.69	0.58	74.76	21.57	349.51	349.53	0 43.0	0 42.9
2417785.5	0.972	19.44	0.63	75.38	21.66	340.54	340.57	1 19.8	1 19.7
2417786.5	0.969	20.17	0.67	75.96	21.74	331.56	331.59	1 56.7	1 56.6
2417787.5	0.967	20.90	0.72	76.49	21.82	322.57	322.60	2 33.6	2 33.5
2417788.5	0.965	21.62	0.76	76.99	21.88	313.57	313.59	3 10.5	3 10.4
2417789.5	0.963	22.32	0.81	77.45	21.95	304.56	304.58	3 47.5	3 47.4
2417790.5	0.960	23.01	0.85	77.88	22.00	295.53	295.56	4 24.5	4 24.4
2417791.5	0.958	23.69	0.90	78.28	22.05	286.50	286.52	5 01.6	5 01.5
2417792.5	0.955	24.36	0.94	78.65	22.08	277.45	277.48	5 38.7	5 38.6

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2418543.5	3.58	-2.0	21.75	103.50	-19.89	-27.11	-24.15	257.60
2418544.5	3.55	2.1	21.90	103.47	19.88	26.38	24.21	258.24
2418545.5	3.53	2.1	22.05	103.41	19.87	25.64	24.27	258.87
2418546.5	3.50	2.1	22.20	103.35	19.87	24.88	24.32	259.50
2418547.5	3.48	2.1	22.34	103.27	19.87	24.11	24.37	260.14
2418548.5	3.46	-2.2	22.48	103.18	-19.88	-23.32	-24.42	260.77
2418549.5	3.44	2.2	22.62	103.07	19.88	22.52	24.47	261.40
2418550.5	3.42	2.2	22.75	102.95	19.90	21.71	24.51	262.04
2418551.5	3.40	2.2	22.88	102.81	19.91	20.88	24.55	262.67
2418552.5	3.38	2.3	23.00	102.66	19.93	20.03	24.58	263.30
2418553.5	3.36	-2.3	23.12	102.50	-19.95	-19.18	-24.62	263.93
2418554.5	3.35	2.3	23.23	102.33	19.98	18.31	24.64	264.56
2418555.5	3.33	2.3	23.33	102.14	20.00	17.43	24.67	265.20
2418556.5	3.32	2.3	23.43	101.94	20.04	16.53	24.69	265.83
2418557.5	3.31	2.4	23.53	101.73	20.07	15.63	24.71	266.46
2418558.5	3.29	-2.4	23.61	101.51	-20.11	-14.71	-24.73	267.09
2418559.5	3.28	2.4	23.69	101.28	20.15	13.79	24.74	267.72
2418560.5	3.27	2.4	23.76	101.03	20.20	12.85	24.75	268.35
2418561.5	3.26	2.4	23.83	100.78	20.25	11.91	24.76	268.98
2418562.5	3.26	2.5	23.88	100.52	20.30	10.95	24.76	269.61
2418563.5	3.25	-2.5	23.93	100.25	-20.35	- 9.99	-24.76	270.24
2418564.5	3.25	2.5	23.97	99.97	20.41	9.02	24.76	270.86
2418565.5	3.24	2.5	24.00	99.69	20.47	8.05	24.75	271.49
2418566.5	3.24	2.5	24.02	99.40	20.53	7.07	24.74	272.12
2418567.5	3.24	2.5	24.03	99.11	20.60	6.08	24.73	272.75
2418568.5	3.24	-2.5	24.03	98.81	-20.66	- 5.09	-24.72	273.37
2418569.5	3.24	2.5	24.03	98.50	20.73	4.10	24.70	274.00
2418570.5	3.24	2.6	24.01	98.20	20.80	3.11	24.68	274.62
2418571.5	3.24	2.6	23.98	97.89	20.88	2.12	24.65	275.25
2418572.5	3.25	2.6	23.95	97.59	20.95	1.12	24.62	275.87
2418573.5	3.25	-2.6	23.91	97.28	-21.03	- 0.13	-24.59	276.50
2418574.5	3.26	2.6	23.86	96.98	21.11	+ 0.86	24.56	277.12
2418575.5	3.27	2.5	23.79	96.67	21.18	1.85	24.52	277.75
2418576.5	3.28	2.5	23.72	96.37	21.26	2.83	24.48	278.37
2418577.5	3.29	2.5	23.65	96.08	21.35	3.81	24.44	278.99
2418578.5	3.30	-2.5	23.56	95.78	-21.43	+ 4.78	-24.39	279.61
2418579.5	3.31	2.5	23.46	95.50	21.51	5.75	24.34	280.23
2418580.5	3.33	2.5	23.36	95.21	21.60	6.71	24.29	280.85
2418581.5	3.35	2.4	23.25	94.94	21.68	7.66	24.24	281.47
2418582.5	3.36	2.4	23.13	94.67	21.77	8.61	24.18	282.09
2418583.5	3.38	-2.4	23.01	94.41	-21.85	+ 9.54	-24.12	282.71
2418584.5	3.40	2.4	22.88	94.16	21.94	10.47	24.05	283.33
2418585.5	3.42	2.3	22.74	93.91	22.02	11.38	23.99	283.95
2418586.5	3.44	2.3	22.59	93.68	22.11	12.29	23.92	284.56
2418587.5	3.47	2.3	22.44	93.45	22.19	13.18	23.84	285.18
2418588.5	3.49	-2.3	22.28	93.24	-22.28	+14.06	-23.77	285.79
2418589.5	3.52	2.2	22.12	93.04	22.37	14.93	23.69	286.41
2418590.5	3.54	2.2	21.96	92.85	22.45	15.78	23.61	287.02
2418591.5	3.57	2.2	21.79	92.67	22.54	16.62	23.53	287.64
2418592.5	3.60	2.1	21.61	92.51	22.62	17.45	23.44	288.25
2418593.5	3.63	-2.1	21.43	92.35	-22.71	+18.26	-23.35	288.86
2418594.5	3.66	2.1	21.25	92.22	22.79	19.06	23.26	289.47
2418595.5	3.69	2.0	21.06	92.09	22.87	19.84	23.17	290.08
2418596.5	3.73	2.0	20.87	91.98	22.96	20.61	23.07	290.69
2418597.5	3.76	2.0	20.68	91.88	23.04	21.36	22.97	291.30
2418598.5	3.80	-1.9	20.49	91.80	-23.12	+22.09	-22.87	291.91
2418599.5	3.83	1.9	20.29	91.73	23.20	22.81	22.76	292.52
2418600.5	3.87	1.9	20.10	91.68	23.28	23.51	22.66	293.12
2418601.5	3.91	1.9	19.90	91.64	23.36	24.19	22.55	293.73
2418602.5	3.95	1.8	19.70	91.62	23.44	24.86	22.44	294.34
2418603.5	3.99	-1.8	19.50	91.61	-23.51	+25.51	-22.32	294.94

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2418543.5	0.951	25.45	1.06	254.30	329.70	187.67	187.71	11 47.1	11 47.0
2418544.5	0.954	24.80	1.01	254.60	329.71	178.61	178.64	12 24.3	12 24.1
2418545.5	0.956	24.13	0.96	254.92	329.73	169.55	169.59	13 01.4	13 01.2
2418546.5	0.959	23.45	0.92	255.26	329.75	160.52	160.55	13 38.4	13 38.3
2418547.5	0.961	22.75	0.87	255.61	329.78	151.49	151.53	14 15.4	14 15.3
2418548.5	0.963	22.05	0.82	255.99	329.82	142.49	142.52	14 52.4	14 52.2
2418549.5	0.966	21.33	0.77	256.39	329.86	133.49	133.53	15 29.2	15 29.1
2418550.5	0.968	20.59	0.73	256.83	329.91	124.51	124.55	16 06.0	16 05.9
2418551.5	0.970	19.85	0.68	257.29	329.96	115.54	115.58	16 42.8	16 42.6
2418552.5	0.972	19.10	0.63	257.79	330.01	106.58	106.62	17 19.5	17 19.3
2418553.5	0.975	18.33	0.59	258.34	330.08	97.64	97.68	17 56.1	17 56.0
2418554.5	0.977	17.56	0.54	258.93	330.14	88.71	88.75	18 32.7	18 32.6
2418555.5	0.979	16.77	0.50	259.57	330.21	79.80	79.83	19 09.2	19 09.1
2418556.5	0.981	15.97	0.45	260.28	330.29	70.89	70.93	19 45.7	19 45.6
2418557.5	0.983	15.17	0.41	261.06	330.37	62.00	62.03	20 22.2	20 22.0
2418558.5	0.984	14.36	0.37	261.93	330.46	53.11	53.15	20 58.6	20 58.4
2418559.5	0.986	13.54	0.33	262.91	330.55	44.24	44.28	21 34.9	21 34.8
2418560.5	0.988	12.71	0.29	264.01	330.65	35.38	35.42	22 11.2	22 11.1
2418561.5	0.989	11.88	0.26	265.26	330.75	26.52	26.56	22 47.5	22 47.3
2418562.5	0.991	11.05	0.22	266.70	330.85	17.68	17.72	23 23.7	23 23.6
2418563.5	0.992	10.22	0.19	268.37	330.96	8.84	8.88	23 59.9	23 59.8
2418564.5	0.993	9.39	0.16	270.33	331.07	0.01	0.05	.. .. .	.. .. .
2418565.5	0.994	8.57	0.13	272.67	331.19	351.19	351.23	0 36.1	0 36.0
2418566.5	0.995	7.76	0.11	275.50	331.31	342.37	342.41	1 12.3	1 12.1
2418567.5	0.996	6.97	0.09	278.96	331.43	333.56	333.60	1 48.4	1 48.3
2418568.5	0.997	6.21	0.07	283.29	331.55	324.75	324.79	2 24.5	2 24.4
2418569.5	0.998	5.48	0.05	288.80	331.68	315.94	315.98	3 00.6	3 00.5
2418570.5	0.998	4.82	0.04	295.87	331.81	307.14	307.17	3 36.8	3 36.6
2418571.5	0.999	4.25	0.03	304.99	331.94	298.33	298.37	4 12.8	4 12.7
2418572.5	0.999	3.82	0.03	316.52	332.07	289.53	289.57	4 48.9	4 48.8
2418573.5	0.999	3.57	0.02	330.26	332.20	280.73	280.77	5 25.0	5 24.9
2418574.5	0.999	3.54	0.02	345.04	332.33	271.92	271.96	6 01.1	6 01.0
2418575.5	0.999	3.75	0.03	359.08	332.46	263.12	263.15	6 37.3	6 37.1
2418576.5	0.999	4.14	0.03	11.04	332.59	254.31	254.34	7 13.4	7 13.2
2418577.5	0.998	4.67	0.04	20.57	332.72	245.49	245.53	7 49.5	7 49.4
2418578.5	0.998	5.31	0.05	27.98	332.85	236.68	236.71	8 25.7	8 25.5
2418579.5	0.997	6.00	0.06	33.73	332.97	227.85	227.89	9 01.9	9 01.7
2418580.5	0.997	6.74	0.08	38.24	333.10	219.02	219.06	9 38.1	9 37.9
2418581.5	0.996	7.50	0.10	41.83	333.22	210.19	210.22	10 14.3	10 14.2
2418582.5	0.995	8.28	0.12	44.75	333.34	201.34	201.38	10 50.6	10 50.5
2418583.5	0.994	9.07	0.14	47.15	333.46	192.49	192.53	11 26.9	11 26.8
2418584.5	0.993	9.86	0.17	49.17	333.57	183.63	183.67	12 03.3	12 03.1
2418585.5	0.991	10.66	0.20	50.87	333.69	174.76	174.80	12 39.7	12 39.5
2418586.5	0.990	11.45	0.22	52.33	333.79	165.88	165.92	13 16.1	13 16.0
2418587.5	0.989	12.24	0.25	53.59	333.90	156.99	157.03	13 52.6	13 52.5
2418588.5	0.987	13.02	0.29	54.70	333.99	148.09	148.13	14 29.2	14 29.0
2418589.5	0.986	13.80	0.32	55.67	334.09	139.18	139.22	15 05.7	15 05.6
2418590.5	0.984	14.56	0.35	56.54	334.18	130.25	130.29	15 42.4	15 42.2
2418591.5	0.982	15.32	0.39	57.31	334.26	121.32	121.35	16 19.1	16 18.9
2418592.5	0.980	16.07	0.42	58.00	334.34	112.37	112.40	16 55.8	16 55.7
2418593.5	0.979	16.81	0.46	58.63	334.41	103.40	103.44	17 32.6	17 32.5
2418594.5	0.977	17.53	0.49	59.20	334.48	94.43	94.46	18 09.5	18 09.4
2418595.5	0.975	18.25	0.53	59.71	334.54	85.44	85.47	18 46.4	18 46.3
2418596.5	0.973	18.95	0.57	60.19	334.59	76.43	76.47	19 23.4	19 23.3
2418597.5	0.971	19.64	0.60	60.62	334.64	67.41	67.45	20 00.5	20 00.3
2418598.5	0.969	20.31	0.64	61.01	334.68	58.38	58.41	20 37.6	20 37.4
2418599.5	0.967	20.98	0.67	61.38	334.71	49.33	49.37	21 14.8	21 14.6
2418600.5	0.965	21.63	0.71	61.72	334.74	40.26	40.30	21 52.0	21 51.9
2418601.5	0.963	22.26	0.74	62.03	334.76	31.18	31.22	22 29.3	22 29.2
2418602.5	0.961	22.89	0.78	62.32	334.77	22.09	22.13	23 06.7	23 06.6
2418603.5	0.959	23.50	0.81	62.59	334.78	12.98	13.02	23 44.2	23 44.0

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2419335.5	4.59	-1.4	16.93	167.34	- 4.69	-23.42	-15.20	321.25
2419336.5	4.57	1.4	17.03	167.25	4.78	22.78	15.01	321.81
2419337.5	4.54	1.4	17.14	167.14	4.88	22.13	14.82	322.38
2419338.5	4.51	1.4	17.23	167.03	4.99	21.47	14.62	322.94
2419339.5	4.49	1.5	17.33	166.90	5.11	20.80	14.43	323.50
2419340.5	4.46	-1.5	17.42	166.76	- 5.23	-20.12	-14.23	324.06
2419341.5	4.44	1.5	17.51	166.60	5.36	19.42	14.04	324.62
2419342.5	4.42	1.5	17.60	166.44	5.49	18.72	13.84	325.18
2419343.5	4.40	1.5	17.68	166.26	5.63	18.00	13.64	325.73
2419344.5	4.38	1.6	17.76	166.07	5.78	17.28	13.44	326.29
2419345.5	4.36	-1.6	17.83	165.87	- 5.93	-16.55	-13.24	326.84
2419346.5	4.34	1.6	17.90	165.66	6.09	15.80	13.04	327.40
2419347.5	4.33	1.6	17.97	165.43	6.26	15.05	12.84	327.95
2419348.5	4.32	1.6	18.03	165.20	6.43	14.29	12.64	328.50
2419349.5	4.30	1.7	18.08	164.96	6.60	13.52	12.44	329.06
2419350.5	4.29	-1.7	18.13	164.70	- 6.78	-12.74	-12.23	329.61
2419351.5	4.28	1.7	18.17	164.44	6.96	11.96	12.03	330.16
2419352.5	4.27	1.7	18.21	164.17	7.15	11.17	11.83	330.70
2419353.5	4.26	1.7	18.24	163.89	7.34	10.37	11.62	331.25
2419354.5	4.26	1.7	18.27	163.60	7.53	9.56	11.42	331.80
2419355.5	4.25	-1.7	18.29	163.31	- 7.73	- 8.75	-11.21	332.34
2419356.5	4.25	1.8	18.30	163.01	7.93	7.94	11.00	332.89
2419357.5	4.25	1.8	18.31	162.70	8.13	7.12	10.80	333.43
2419358.5	4.25	1.8	18.31	162.39	8.33	6.30	10.59	333.98
2419359.5	4.25	1.8	18.30	162.07	8.54	5.47	10.38	334.52
2419360.5	4.25	-1.8	18.29	161.75	- 8.74	- 4.65	-10.17	335.06
2419361.5	4.26	1.8	18.27	161.43	8.95	3.82	9.97	335.60
2419362.5	4.26	1.8	18.24	161.11	9.15	2.99	9.76	336.14
2419363.5	4.27	1.8	18.21	160.78	9.35	2.16	9.55	336.68
2419364.5	4.28	1.8	18.16	160.45	9.56	1.33	9.34	337.21
2419365.5	4.29	-1.8	18.12	160.13	- 9.76	- 0.51	- 9.13	337.75
2419366.5	4.31	1.8	18.06	159.81	9.96	+ 0.31	8.92	338.29
2419367.5	4.32	1.8	18.00	159.48	10.16	1.13	8.70	338.82
2419368.5	4.34	1.8	17.93	159.16	10.35	1.95	8.49	339.35
2419369.5	4.35	1.8	17.86	158.85	10.54	2.76	8.28	339.88
2419370.5	4.37	-1.7	17.78	158.54	-10.73	+ 3.56	- 8.07	340.42
2419371.5	4.39	1.7	17.70	158.23	10.92	4.36	7.86	340.95
2419372.5	4.42	1.7	17.61	157.93	11.10	5.15	7.65	341.48
2419373.5	4.44	1.7	17.51	157.63	11.27	5.93	7.43	342.01
2419374.5	4.47	1.6	17.41	157.35	11.45	6.71	7.22	342.53
2419375.5	4.50	-1.6	17.30	157.06	-11.61	+ 7.48	- 7.01	343.06
2419376.5	4.52	1.6	17.19	156.79	11.77	8.23	6.80	343.59
2419377.5	4.55	1.5	17.08	156.53	11.93	8.98	6.58	344.11
2419378.5	4.59	1.5	16.96	156.27	12.08	9.72	6.37	344.64
2419379.5	4.62	1.5	16.84	156.03	12.22	10.45	6.16	345.16
2419380.5	4.65	-1.5	16.71	155.79	-12.36	+11.16	- 5.95	345.68
2419381.5	4.69	1.4	16.58	155.56	12.50	11.87	5.73	346.20
2419382.5	4.73	1.4	16.45	155.35	12.62	12.56	5.52	346.73
2419383.5	4.77	1.4	16.32	155.14	12.74	13.24	5.31	347.24
2419384.5	4.81	1.3	16.18	154.95	12.86	13.91	5.09	347.76
2419385.5	4.85	-1.3	16.04	154.76	-12.97	+14.57	- 4.88	348.28
2419386.5	4.89	1.3	15.90	154.59	13.07	15.22	4.67	348.80
2419387.5	4.94	1.2	15.75	154.43	13.16	15.85	4.45	349.32
2419388.5	4.98	1.2	15.61	154.28	13.25	16.46	4.24	349.83
2419389.5	5.03	1.2	15.46	154.15	13.33	17.07	4.03	350.35
2419390.5	5.08	-1.1	15.32	154.03	-13.41	+17.66	- 3.82	350.86
2419391.5	5.13	1.1	15.17	153.92	13.48	18.24	3.60	351.37
2419392.5	5.18	1.1	15.02	153.82	13.54	18.80	3.39	351.88
2419393.5	5.23	1.0	14.87	153.73	13.59	19.35	3.18	352.40
2419394.5	5.28	1.0	14.72	153.66	13.64	19.89	2.97	352.91
2419395.5	5.34	-1.0	14.57	153.60	-13.68	+20.41	- 2.75	353.42

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2419335.5	0.952	25.31	0.81	262.17	325.94	110.02	110.07	17 05.6	17 05.4
2419336.5	0.955	24.63	0.77	262.08	325.90	101.01	101.06	17 42.5	17 42.3
2419337.5	0.957	23.93	0.74	261.97	325.85	92.01	92.06	18 19.4	18 19.2
2419338.5	0.960	23.22	0.70	261.86	325.80	83.03	83.08	18 56.2	18 56.0
2419339.5	0.962	22.49	0.66	261.73	325.74	74.05	74.10	19 33.0	19 32.8
2419340.5	0.964	21.75	0.62	261.59	325.68	65.09	65.14	20 09.7	20 09.5
2419341.5	0.967	21.00	0.58	261.44	325.62	56.14	56.19	20 46.4	20 46.2
2419342.5	0.969	20.23	0.54	261.27	325.55	47.21	47.26	21 23.0	21 22.8
2419343.5	0.971	19.46	0.50	261.09	325.47	38.28	38.33	21 59.5	21 59.3
2419344.5	0.974	18.67	0.47	260.89	325.40	29.37	29.42	22 36.1	22 35.9
2419345.5	0.976	17.87	0.43	260.68	325.31	20.47	20.51	23 12.5	23 12.3
2419346.5	0.978	17.05	0.39	260.45	325.23	11.57	11.62	23 49.0	23 48.8
2419347.5	0.980	16.23	0.36	260.20	325.14	2.69	2.74	.. .. .	.. .. .
2419348.5	0.982	15.40	0.32	259.93	325.05	353.82	353.87	0 25.3	0 25.1
2419349.5	0.984	14.55	0.29	259.63	324.96	344.96	345.01	1 01.7	1 01.5
2419350.5	0.986	13.70	0.26	259.30	324.87	336.11	336.16	1 38.0	1 37.8
2419351.5	0.988	12.84	0.23	258.94	324.77	327.27	327.32	2 14.2	2 14.0
2419352.5	0.989	11.96	0.20	258.55	324.67	318.43	318.48	2 50.5	2 50.3
2419353.5	0.991	11.09	0.17	258.10	324.57	309.61	309.65	3 26.6	3 26.4
2419354.5	0.992	10.20	0.14	257.59	324.47	300.79	300.84	4 02.8	4 02.6
2419355.5	0.993	9.31	0.12	257.02	324.36	291.97	292.02	4 38.9	4 38.7
2419356.5	0.995	8.41	0.10	256.34	324.26	283.17	283.22	5 15.0	5 14.8
2419357.5	0.996	7.51	0.08	255.53	324.16	274.37	274.42	5 51.1	5 50.9
2419358.5	0.997	6.61	0.06	254.54	324.05	265.57	265.62	6 27.2	6 27.0
2419359.5	0.998	5.71	0.05	253.28	323.95	256.78	256.83	7 03.2	7 03.0
2419360.5	0.998	4.80	0.03	251.60	323.85	247.99	248.04	7 39.3	7 39.1
2419361.5	0.999	3.90	0.02	249.22	323.75	239.20	239.25	8 15.3	8 15.1
2419362.5	0.999	3.01	0.01	245.52	323.65	230.42	230.47	8 51.3	8 51.1
2419363.5	1.000	2.14	0.01	238.90	323.55	221.63	221.68	9 27.3	9 27.1
2419364.5	1.000	1.34	0.00	224.07	323.45	212.85	212.90	10 03.3	10 03.1
2419365.5	1.000	0.81	0.00	181.90	323.35	204.06	204.11	10 39.4	10 39.2
2419366.5	1.000	1.09	0.00	126.74	323.26	195.27	195.32	11 15.4	11 15.2
2419367.5	1.000	1.83	0.00	105.49	323.17	186.49	186.53	11 51.4	11 51.2
2419368.5	0.999	2.67	0.01	96.95	323.08	177.69	177.74	12 27.5	12 27.3
2419369.5	0.999	3.54	0.02	92.49	322.99	168.90	168.95	13 03.6	13 03.4
2419370.5	0.999	4.41	0.03	89.74	322.91	160.09	160.14	13 39.7	13 39.5
2419371.5	0.998	5.28	0.04	87.86	322.82	151.29	151.34	14 15.8	14 15.6
2419372.5	0.997	6.14	0.05	86.47	322.75	142.48	142.53	14 51.9	14 51.7
2419373.5	0.996	7.00	0.07	85.40	322.67	133.66	133.71	15 28.1	15 27.9
2419374.5	0.995	7.85	0.08	84.54	322.60	124.83	124.88	16 04.3	16 04.1
2419375.5	0.994	8.69	0.10	83.82	322.53	116.00	116.05	16 40.6	16 40.4
2419376.5	0.993	9.53	0.12	83.22	322.46	107.16	107.20	17 16.9	17 16.7
2419377.5	0.992	10.35	0.14	82.70	322.40	98.30	98.35	17 53.2	17 53.0
2419378.5	0.991	11.16	0.16	82.23	322.34	89.44	89.49	18 29.6	18 29.4
2419379.5	0.989	11.96	0.18	81.82	322.28	80.57	80.62	19 06.0	19 05.8
2419380.5	0.988	12.75	0.21	81.45	322.23	71.69	71.74	19 42.4	19 42.2
2419381.5	0.986	13.52	0.23	81.12	322.18	62.80	62.85	20 18.9	20 18.7
2419382.5	0.985	14.29	0.25	80.81	322.13	53.90	53.95	20 55.5	20 55.3
2419383.5	0.983	15.04	0.28	80.53	322.09	44.99	45.04	21 32.1	21 31.9
2419384.5	0.981	15.77	0.30	80.27	322.05	36.07	36.12	22 08.7	22 08.5
2419385.5	0.979	16.50	0.33	80.04	322.01	27.13	27.18	22 45.4	22 45.2
2419386.5	0.978	17.21	0.36	79.81	321.97	18.19	18.23	23 22.2	23 22.0
2419387.5	0.976	17.90	0.38	79.61	321.94	9.23	9.27	23 59.0	23 58.8
2419388.5	0.974	18.58	0.41	79.42	321.91	0.25	0.30	.. .. .	.. .. .
2419389.5	0.972	19.25	0.43	79.24	321.88	351.27	351.32	0 35.8	0 35.6
2419390.5	0.970	19.90	0.46	79.07	321.85	342.27	342.32	1 12.7	1 12.5
2419391.5	0.968	20.54	0.48	78.92	321.83	333.26	333.31	1 49.7	1 49.5
2419392.5	0.966	21.16	0.51	78.77	321.81	324.24	324.29	2 26.7	2 26.5
2419393.5	0.964	21.77	0.53	78.64	321.79	315.20	315.25	3 03.8	3 03.6
2419394.5	0.962	22.36	0.55	78.52	321.78	306.15	306.20	3 40.9	3 40.7
2419395.5	0.960	22.94	0.58	78.40	321.76	297.09	297.14	4 18.1	4 17.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2420108.5	5.69	-0.8	13.66	207.99	+10.99	-22.18	+ 2.67	6.39
2420109.5	5.66	0.8	13.75	207.86	10.88	21.62	2.87	6.88
2420110.5	5.62	0.8	13.84	207.73	10.78	21.04	3.08	7.36
2420111.5	5.58	0.9	13.93	207.58	10.67	20.45	3.28	7.85
2420112.5	5.55	0.9	14.01	207.42	10.55	19.84	3.48	8.34
2420113.5	5.52	-0.9	14.10	207.25	+10.42	-19.23	+ 3.68	8.82
2420114.5	5.49	0.9	14.18	207.06	10.30	18.60	3.88	9.31
2420115.5	5.46	0.9	14.25	206.86	10.17	17.96	4.08	9.79
2420116.5	5.43	1.0	14.33	206.65	10.03	17.31	4.28	10.27
2420117.5	5.40	1.0	14.40	206.43	9.89	16.64	4.48	10.76
2420118.5	5.37	-1.0	14.47	206.20	+ 9.74	-15.97	+ 4.68	11.24
2420119.5	5.35	1.0	14.54	205.95	9.59	15.28	4.88	11.72
2420120.5	5.33	1.0	14.60	205.69	9.44	14.59	5.08	12.20
2420121.5	5.30	1.1	14.66	205.43	9.28	13.88	5.28	12.68
2420122.5	5.28	1.1	14.72	205.15	9.12	13.16	5.47	13.16
2420123.5	5.26	-1.1	14.77	204.86	+ 8.95	-12.44	+ 5.67	13.64
2420124.5	5.25	1.1	14.82	204.57	8.78	11.70	5.86	14.11
2420125.5	5.23	1.1	14.86	204.26	8.61	10.96	6.06	14.59
2420126.5	5.22	1.1	14.90	203.95	8.44	10.21	6.25	15.07
2420127.5	5.21	1.2	14.94	203.63	8.26	9.45	6.45	15.54
2420128.5	5.20	-1.2	14.97	203.30	+ 8.08	- 8.69	+ 6.64	16.02
2420129.5	5.19	1.2	14.99	202.96	7.90	7.91	6.83	16.49
2420130.5	5.18	1.2	15.01	202.63	7.72	7.14	7.02	16.97
2420131.5	5.18	1.2	15.02	202.28	7.54	6.36	7.21	17.44
2420132.5	5.17	1.2	15.03	201.93	7.35	5.57	7.40	17.92
2420133.5	5.17	-1.2	15.04	201.58	+ 7.17	- 4.78	+ 7.59	18.39
2420134.5	5.17	1.2	15.04	201.23	6.98	3.99	7.78	18.86
2420135.5	5.17	1.3	15.03	200.87	6.80	3.20	7.97	19.33
2420136.5	5.18	1.3	15.02	200.51	6.62	2.41	8.16	19.80
2420137.5	5.19	1.3	15.00	200.15	6.43	1.62	8.34	20.27
2420138.5	5.19	-1.3	14.98	199.80	+ 6.25	- 0.82	+ 8.53	20.74
2420139.5	5.20	1.2	14.95	199.44	6.08	- 0.03	8.72	21.21
2420140.5	5.21	1.2	14.92	199.09	5.90	+ 0.76	8.90	21.68
2420141.5	5.23	1.2	14.88	198.73	5.72	1.55	9.08	22.14
2420142.5	5.24	1.2	14.84	198.38	5.55	2.33	9.27	22.61
2420143.5	5.26	-1.2	14.79	198.04	+ 5.39	+ 3.11	+ 9.45	23.08
2420144.5	5.28	1.2	14.74	197.70	5.22	3.89	9.63	23.54
2420145.5	5.30	1.1	14.68	197.36	5.06	4.66	9.81	24.01
2420146.5	5.32	1.1	14.62	197.03	4.90	5.42	9.99	24.47
2420147.5	5.35	1.1	14.55	196.71	4.75	6.18	10.17	24.94
2420148.5	5.37	-1.1	14.48	196.39	+ 4.60	+ 6.93	+10.35	25.40
2420149.5	5.40	1.0	14.41	196.08	4.46	7.68	10.53	25.86
2420150.5	5.43	1.0	14.33	195.78	4.32	8.42	10.70	26.32
2420151.5	5.46	1.0	14.25	195.48	4.19	9.14	10.88	26.79
2420152.5	5.49	1.0	14.17	195.20	4.06	9.87	11.06	27.25
2420153.5	5.52	-0.9	14.08	194.92	+ 3.94	+10.58	+11.23	27.71
2420154.5	5.56	0.9	13.99	194.65	3.82	11.28	11.40	28.17
2420155.5	5.60	0.9	13.90	194.40	3.71	11.97	11.58	28.63
2420156.5	5.63	0.9	13.80	194.15	3.60	12.65	11.75	29.09
2420157.5	5.68	0.8	13.70	193.91	3.50	13.32	11.92	29.55
2420158.5	5.72	-0.8	13.60	193.69	+ 3.41	+13.98	+12.09	30.01
2420159.5	5.76	0.8	13.50	193.47	3.33	14.63	12.26	30.47
2420160.5	5.81	0.8	13.40	193.27	3.25	15.27	12.43	30.92
2420161.5	5.85	0.7	13.29	193.08	3.17	15.90	12.60	31.38
2420162.5	5.90	0.7	13.18	192.90	3.11	16.52	12.77	31.84
2420163.5	5.95	-0.7	13.07	192.73	+ 3.04	+17.12	+12.93	32.29
2420164.5	6.00	0.6	12.97	192.57	2.99	17.71	13.10	32.75
2420165.5	6.05	0.6	12.86	192.43	2.94	18.29	13.26	33.20
2420166.5	6.10	0.6	12.74	192.30	2.90	18.86	13.42	33.66
2420167.5	6.16	0.6	12.63	192.18	2.87	19.42	13.59	34.11
2420168.5	6.21	-0.5	12.52	192.07	+ 2.84	+19.96	+13.75	34.57

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2420108.5	0.958	23.52	0.57	276.75	347.66	228.59	228.65	8 59.1	8 58.8
2420109.5	0.961	22.89	0.54	276.49	347.57	219.61	219.67	9 35.9	9 35.6
2420110.5	0.963	22.24	0.51	276.21	347.48	210.65	210.71	10 12.6	10 12.4
2420111.5	0.965	21.58	0.49	275.91	347.38	201.70	201.76	10 49.3	10 49.1
2420112.5	0.967	20.91	0.46	275.58	347.26	192.76	192.82	11 26.0	11 25.7
2420113.5	0.969	20.22	0.43	275.23	347.14	183.83	183.89	12 02.6	12 02.3
2420114.5	0.971	19.53	0.41	274.86	347.02	174.92	174.98	12 39.1	12 38.9
2420115.5	0.973	18.82	0.38	274.45	346.88	166.02	166.08	13 15.6	13 15.3
2420116.5	0.975	18.10	0.35	274.01	346.74	157.13	157.19	13 52.0	13 51.8
2420117.5	0.977	17.37	0.33	273.53	346.58	148.25	148.31	14 28.4	14 28.2
2420118.5	0.979	16.62	0.30	273.02	346.42	139.38	139.44	15 04.7	15 04.5
2420119.5	0.981	15.87	0.28	272.45	346.26	130.52	130.58	15 41.0	15 40.8
2420120.5	0.983	15.11	0.25	271.83	346.08	121.68	121.74	16 17.3	16 17.0
2420121.5	0.984	14.33	0.23	271.16	345.90	112.84	112.90	16 53.5	16 53.2
2420122.5	0.986	13.55	0.20	270.41	345.71	104.02	104.08	17 29.6	17 29.4
2420123.5	0.988	12.76	0.18	269.58	345.52	95.20	95.26	18 05.8	18 05.5
2420124.5	0.989	11.97	0.16	268.65	345.32	86.39	86.45	18 41.9	18 41.6
2420125.5	0.991	11.16	0.14	267.59	345.11	77.59	77.65	19 17.9	19 17.7
2420126.5	0.992	10.36	0.12	266.40	344.90	68.80	68.86	19 53.9	19 53.7
2420127.5	0.993	9.55	0.10	265.02	344.68	60.02	60.08	20 29.9	20 29.7
2420128.5	0.994	8.73	0.09	263.40	344.46	51.24	51.30	21 05.9	21 05.6
2420129.5	0.995	7.92	0.07	261.49	344.24	42.47	42.53	21 41.8	21 41.6
2420130.5	0.996	7.11	0.06	259.17	344.01	33.70	33.76	22 17.8	22 17.5
2420131.5	0.997	6.31	0.05	256.30	343.78	24.94	25.00	22 53.7	22 53.4
2420132.5	0.998	5.52	0.03	252.66	343.55	16.18	16.24	23 29.6	23 29.3
2420133.5	0.998	4.76	0.03	247.89	343.31	7.42	7.48	.. .. .	.. .. .
2420134.5	0.999	4.04	0.02	241.43	343.08	358.67	358.73	0 05.5	0 05.2
2420135.5	0.999	3.38	0.01	232.40	342.84	349.92	349.98	0 41.3	0 41.1
2420136.5	0.999	2.84	0.01	219.62	342.60	341.17	341.23	1 17.2	1 17.0
2420137.5	1.000	2.49	0.01	202.24	342.37	332.41	332.47	1 53.1	1 52.8
2420138.5	1.000	2.42	0.01	181.77	342.13	323.66	323.72	2 29.0	2 28.7
2420139.5	0.999	2.64	0.01	162.53	341.89	314.91	314.97	3 04.9	3 04.6
2420140.5	0.999	3.09	0.01	147.60	341.66	306.15	306.21	3 40.8	3 40.5
2420141.5	0.999	3.69	0.02	136.97	341.43	297.39	297.45	4 16.7	4 16.4
2420142.5	0.999	4.37	0.02	129.43	341.20	288.63	288.69	4 52.6	4 52.4
2420143.5	0.998	5.10	0.03	123.95	340.98	279.86	279.92	5 28.6	5 28.3
2420144.5	0.997	5.86	0.04	119.83	340.76	271.09	271.15	6 04.5	6 04.3
2420145.5	0.997	6.63	0.05	116.62	340.54	262.31	262.37	6 40.5	6 40.3
2420146.5	0.996	7.40	0.06	114.06	340.33	253.53	253.59	7 16.5	7 16.3
2420147.5	0.995	8.18	0.07	111.97	340.12	244.74	244.80	7 52.6	7 52.3
2420148.5	0.994	8.96	0.09	110.21	339.91	235.94	236.00	8 28.7	8 28.4
2420149.5	0.993	9.73	0.10	108.72	339.72	227.14	227.20	9 04.8	9 04.5
2420150.5	0.992	10.50	0.12	107.43	339.52	218.33	218.39	9 40.9	9 40.7
2420151.5	0.990	11.27	0.14	106.30	339.34	209.51	209.57	10 17.1	10 16.9
2420152.5	0.989	12.02	0.16	105.31	339.16	200.68	200.74	10 53.3	10 53.1
2420153.5	0.988	12.77	0.17	104.42	338.98	191.84	191.90	11 29.6	11 29.4
2420154.5	0.986	13.50	0.19	103.62	338.82	182.99	183.05	12 05.9	12 05.7
2420155.5	0.985	14.23	0.21	102.89	338.66	174.13	174.19	12 42.3	12 42.0
2420156.5	0.983	14.94	0.23	102.23	338.50	165.26	165.32	13 18.7	13 18.4
2420157.5	0.981	15.65	0.25	101.63	338.36	156.37	156.43	13 55.1	13 54.9
2420158.5	0.980	16.34	0.27	101.08	338.22	147.48	147.54	14 31.6	14 31.4
2420159.5	0.978	17.02	0.30	100.56	338.09	138.58	138.64	15 08.2	15 07.9
2420160.5	0.976	17.69	0.32	100.09	337.96	129.66	129.72	15 44.8	15 44.5
2420161.5	0.975	18.34	0.34	99.65	337.85	120.73	120.79	16 21.4	16 21.2
2420162.5	0.973	18.98	0.36	99.25	337.74	111.79	111.85	16 58.1	16 57.9
2420163.5	0.971	19.61	0.38	98.87	337.64	102.84	102.90	17 34.9	17 34.7
2420164.5	0.969	20.22	0.40	98.52	337.55	93.88	93.94	18 11.7	18 11.5
2420165.5	0.967	20.82	0.42	98.19	337.46	84.90	84.96	18 48.6	18 48.3
2420166.5	0.966	21.41	0.44	97.89	337.38	75.91	75.97	19 25.5	19 25.2
2420167.5	0.964	21.98	0.46	97.60	337.31	66.91	66.97	20 02.4	20 02.2
2420168.5	0.962	22.54	0.48	97.34	337.25	57.90	57.96	20 39.5	20 39.2

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2420873.5	6.37	-0.5	12.22	243.36	+20.30	-23.41	+16.50	42.68
2420874.5	6.32	0.5	12.31	243.22	20.24	22.83	16.64	43.13
2420875.5	6.27	0.5	12.40	243.06	20.17	22.23	16.78	43.58
2420876.5	6.23	0.5	12.49	242.89	20.11	21.62	16.92	44.02
2420877.5	6.18	0.6	12.58	242.71	20.04	21.00	17.06	44.47
2420878.5	6.14	-0.6	12.66	242.51	+19.97	-20.36	+17.20	44.91
2420879.5	6.10	0.6	12.75	242.30	19.90	19.71	17.34	45.36
2420880.5	6.06	0.6	12.83	242.08	19.82	19.04	17.48	45.80
2420881.5	6.02	0.7	12.91	241.85	19.75	18.36	17.61	46.25
2420882.5	5.99	0.7	12.99	241.60	19.67	17.67	17.75	46.69
2420883.5	5.95	-0.7	13.06	241.34	+19.59	-16.96	+17.88	47.14
2420884.5	5.92	0.7	13.14	241.06	19.50	16.24	18.01	47.58
2420885.5	5.89	0.7	13.21	240.78	19.42	15.51	18.14	48.02
2420886.5	5.86	0.8	13.28	240.48	19.33	14.77	18.27	48.47
2420887.5	5.83	0.8	13.34	240.17	19.25	14.01	18.40	48.91
2420888.5	5.80	-0.8	13.40	239.85	+19.16	-13.24	+18.53	49.35
2420889.5	5.78	0.8	13.46	239.52	19.07	12.47	18.66	49.80
2420890.5	5.75	0.8	13.52	239.18	18.98	11.68	18.78	50.24
2420891.5	5.73	0.9	13.57	238.83	18.88	10.88	18.91	50.68
2420892.5	5.71	0.9	13.62	238.47	18.79	10.08	19.03	51.12
2420893.5	5.69	-0.9	13.66	238.11	+18.69	- 9.26	+19.15	51.56
2420894.5	5.68	0.9	13.70	237.74	18.60	8.44	19.27	52.00
2420895.5	5.66	0.9	13.74	237.36	18.50	7.61	19.39	52.45
2420896.5	5.65	0.9	13.77	236.97	18.40	6.78	19.51	52.89
2420897.5	5.64	1.0	13.80	236.58	18.30	5.93	19.63	53.33
2420898.5	5.63	-1.0	13.82	236.18	+18.20	- 5.09	+19.75	53.77
2420899.5	5.62	1.0	13.84	235.78	18.11	4.24	19.86	54.21
2420900.5	5.61	1.0	13.86	235.38	18.01	3.38	19.98	54.65
2420901.5	5.61	1.0	13.86	234.98	17.91	2.52	20.09	55.09
2420902.5	5.61	1.0	13.87	234.57	17.81	1.67	20.20	55.53
2420903.5	5.61	-1.0	13.87	234.17	+17.71	- 0.81	+20.31	55.97
2420904.5	5.61	1.0	13.86	233.76	17.62	+ 0.05	20.42	56.41
2420905.5	5.61	1.0	13.85	233.35	17.52	0.91	20.53	56.84
2420906.5	5.62	1.0	13.84	232.95	17.43	1.77	20.64	57.28
2420907.5	5.63	1.0	13.82	232.55	17.33	2.63	20.74	57.72
2420908.5	5.64	-1.0	13.80	232.15	+17.24	+ 3.48	+20.85	58.16
2420909.5	5.65	1.0	13.77	231.76	17.15	4.33	20.95	58.60
2420910.5	5.66	0.9	13.74	231.37	17.06	5.18	21.05	59.04
2420911.5	5.68	0.9	13.70	230.99	16.98	6.02	21.15	59.48
2420912.5	5.69	0.9	13.66	230.61	16.89	6.85	21.25	59.92
2420913.5	5.71	-0.9	13.62	230.24	+16.81	+ 7.68	+21.35	60.35
2420914.5	5.73	0.9	13.57	229.88	16.74	8.50	21.44	60.79
2420915.5	5.75	0.8	13.51	229.52	16.66	9.32	21.54	61.23
2420916.5	5.78	0.8	13.46	229.17	16.59	10.13	21.63	61.67
2420917.5	5.80	0.8	13.40	228.83	16.52	10.93	21.73	62.10
2420918.5	5.83	-0.8	13.34	228.50	+16.45	+11.72	+21.82	62.54
2420919.5	5.86	0.8	13.27	228.18	16.39	12.50	21.91	62.98
2420920.5	5.89	0.7	13.20	227.87	16.33	13.27	22.00	63.42
2420921.5	5.92	0.7	13.13	227.57	16.27	14.03	22.09	63.85
2420922.5	5.96	0.7	13.06	227.28	16.22	14.78	22.17	64.29
2420923.5	5.99	-0.7	12.98	227.01	+16.17	+15.52	+22.26	64.73
2420924.5	6.03	0.6	12.90	226.74	16.12	16.25	22.34	65.16
2420925.5	6.07	0.6	12.82	226.49	16.08	16.97	22.42	65.60
2420926.5	6.11	0.6	12.73	226.24	16.05	17.68	22.51	66.04
2420927.5	6.15	0.6	12.65	226.01	16.01	18.37	22.58	66.47
2420928.5	6.19	-0.5	12.56	225.80	+15.98	+19.06	+22.66	66.91
2420929.5	6.24	0.5	12.47	225.59	15.96	19.73	22.74	67.35
2420930.5	6.28	0.5	12.38	225.40	15.94	20.38	22.82	67.78
2420931.5	6.33	0.5	12.29	225.22	15.92	21.03	22.89	68.22
2420932.5	6.37	0.4	12.20	225.05	15.91	21.66	22.96	68.66
2420933.5	6.42	-0.4	12.11	224.90	+15.90	+22.28	+23.03	69.09

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2420873.5	0.962	22.51	0.47	286.09	10.25	65.41	65.48	20 08.4	20 08.1
2420874.5	0.964	21.93	0.45	285.82	10.17	56.45	56.52	20 45.1	20 44.8
2420875.5	0.966	21.34	0.42	285.54	10.08	47.51	47.58	21 21.7	21 21.5
2420876.5	0.968	20.73	0.40	285.23	9.98	38.58	38.65	21 58.3	21 58.0
2420877.5	0.970	20.11	0.38	284.91	9.88	29.67	29.74	22 34.8	22 34.6
2420878.5	0.971	19.48	0.36	284.56	9.76	20.76	20.83	23 11.3	23 11.0
2420879.5	0.973	18.83	0.34	284.18	9.64	11.88	11.94	23 47.7	23 47.4
2420880.5	0.975	18.18	0.32	283.77	9.51	3.00	3.07	.. ...	.. ...
2420881.5	0.977	17.51	0.30	283.34	9.37	354.14	354.21	0 24.0	0 23.8
2420882.5	0.979	16.83	0.28	282.86	9.22	345.29	345.36	1 00.3	1 00.0
2420883.5	0.980	16.14	0.26	282.34	9.06	336.45	336.52	1 36.6	1 36.3
2420884.5	0.982	15.44	0.24	281.78	8.90	327.62	327.69	2 12.8	2 12.5
2420885.5	0.984	14.73	0.22	281.16	8.73	318.81	318.88	2 48.9	2 48.6
2420886.5	0.985	14.01	0.20	280.47	8.55	310.01	310.07	3 25.0	3 24.7
2420887.5	0.987	13.28	0.18	279.72	8.36	301.21	301.28	4 01.0	4 00.7
2420888.5	0.988	12.54	0.16	278.88	8.17	292.43	292.50	4 37.0	4 36.7
2420889.5	0.989	11.80	0.14	277.93	7.97	283.66	283.73	5 13.0	5 12.7
2420890.5	0.991	11.05	0.13	276.87	7.77	274.90	274.96	5 48.9	5 48.6
2420891.5	0.992	10.29	0.11	275.65	7.56	266.14	266.21	6 24.8	6 24.5
2420892.5	0.993	9.53	0.09	274.24	7.34	257.40	257.47	7 00.6	7 00.3
2420893.5	0.994	8.77	0.08	272.60	7.12	248.66	248.73	7 36.4	7 36.2
2420894.5	0.995	8.01	0.07	270.66	6.89	239.93	240.00	8 12.2	8 11.9
2420895.5	0.996	7.25	0.05	268.33	6.65	231.20	231.27	8 48.0	8 47.7
2420896.5	0.997	6.50	0.04	265.47	6.42	222.48	222.55	9 23.7	9 23.4
2420897.5	0.997	5.76	0.03	261.90	6.18	213.77	213.84	9 59.4	9 59.1
2420898.5	0.998	5.05	0.03	257.32	5.93	205.06	205.13	10 35.1	10 34.8
2420899.5	0.999	4.37	0.02	251.30	5.68	196.35	196.42	11 10.8	11 10.5
2420900.5	0.999	3.75	0.01	243.22	5.43	187.65	187.72	11 46.5	11 46.2
2420901.5	0.999	3.23	0.01	232.31	5.18	178.95	179.01	12 22.2	12 21.9
2420902.5	0.999	2.86	0.01	217.97	4.93	170.25	170.31	12 57.8	12 57.5
2420903.5	0.999	2.71	0.01	200.81	4.67	161.54	161.61	13 33.5	13 33.2
2420904.5	0.999	2.81	0.01	183.32	4.42	152.84	152.91	14 09.2	14 08.9
2420905.5	0.999	3.13	0.01	168.24	4.17	144.14	144.20	14 44.9	14 44.6
2420906.5	0.999	3.62	0.01	156.60	3.91	135.43	135.50	15 20.6	15 20.3
2420907.5	0.999	4.22	0.02	147.96	3.66	126.72	126.79	15 56.3	15 56.0
2420908.5	0.998	4.88	0.03	141.54	3.41	118.01	118.08	16 32.0	16 31.7
2420909.5	0.998	5.58	0.03	136.68	3.16	109.29	109.36	17 07.7	17 07.5
2420910.5	0.997	6.31	0.04	132.89	2.91	100.57	100.64	17 43.5	17 43.2
2420911.5	0.996	7.05	0.05	129.88	2.67	91.84	91.91	18 19.3	18 19.0
2420912.5	0.995	7.80	0.06	127.43	2.43	83.10	83.17	18 55.1	18 54.9
2420913.5	0.994	8.56	0.08	125.39	2.19	74.36	74.43	19 31.0	19 30.7
2420914.5	0.993	9.31	0.09	123.67	1.96	65.61	65.68	20 06.9	20 06.6
2420915.5	0.992	10.07	0.10	122.19	1.73	56.86	56.92	20 42.8	20 42.6
2420916.5	0.991	10.82	0.12	120.91	1.51	48.09	48.16	21 18.8	21 18.5
2420917.5	0.990	11.56	0.14	119.79	1.29	39.32	39.38	21 54.8	21 54.5
2420918.5	0.989	12.30	0.15	118.79	1.08	30.53	30.60	22 30.9	22 30.6
2420919.5	0.987	13.03	0.17	117.90	0.87	21.74	21.80	23 07.0	23 06.7
2420920.5	0.986	13.75	0.19	117.10	0.67	12.93	13.00	23 43.1	23 42.8
2420921.5	0.984	14.46	0.21	116.37	0.48	4.11	4.18	.. ...	.. ...
2420922.5	0.983	15.17	0.23	115.71	0.29	355.29	355.36	0 19.3	0 19.0
2420923.5	0.981	15.86	0.25	115.10	0.11	346.45	346.52	0 55.6	0 55.3
2420924.5	0.979	16.55	0.27	114.55	359.94	337.60	337.67	1 31.9	1 31.6
2420925.5	0.978	17.22	0.29	114.03	359.78	328.73	328.80	2 08.2	2 07.9
2420926.5	0.976	17.88	0.31	113.56	359.62	319.86	319.93	2 44.6	2 44.4
2420927.5	0.974	18.53	0.33	113.11	359.47	310.97	311.04	3 21.1	3 20.8
2420928.5	0.972	19.16	0.35	112.70	359.33	302.07	302.14	3 57.6	3 57.3
2420929.5	0.970	19.79	0.37	112.32	359.20	293.16	293.22	4 34.2	4 33.9
2420930.5	0.969	20.40	0.39	111.96	359.07	284.23	284.30	5 10.8	5 10.5
2420931.5	0.967	21.00	0.41	111.63	358.96	275.29	275.36	5 47.5	5 47.2
2420932.5	0.965	21.58	0.43	111.32	358.85	266.33	266.40	6 24.2	6 24.0
2420933.5	0.963	22.16	0.45	111.03	358.75	257.37	257.44	7 01.0	7 00.8

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2421637.5	6.47	-0.4	12.03	279.09	+22.14	-23.88	+24.04	76.52
2421638.5	6.41	0.4	12.13	278.96	22.13	23.27	24.08	76.96
2421639.5	6.36	0.5	12.23	278.81	22.13	22.65	24.13	77.39
2421640.5	6.31	0.5	12.32	278.65	22.12	22.01	24.17	77.83
2421641.5	6.26	0.5	12.42	278.47	22.12	21.35	24.21	78.27
2421642.5	6.21	-0.5	12.52	278.28	+22.12	-20.69	+24.25	78.71
2421643.5	6.16	0.6	12.62	278.08	22.12	20.00	24.29	79.14
2421644.5	6.12	0.6	12.71	277.86	22.12	19.31	24.33	79.58
2421645.5	6.08	0.6	12.80	277.63	22.12	18.60	24.36	80.02
2421646.5	6.03	0.6	12.89	277.39	22.13	17.88	24.40	80.46
2421647.5	5.99	-0.7	12.98	277.13	+22.13	-17.14	+24.43	80.89
2421648.5	5.95	0.7	13.07	276.86	22.14	16.39	24.46	81.33
2421649.5	5.91	0.7	13.15	276.58	22.15	15.63	24.49	81.77
2421650.5	5.88	0.7	13.24	276.29	22.16	14.85	24.52	82.21
2421651.5	5.84	0.8	13.32	275.98	22.17	14.07	24.55	82.65
2421652.5	5.81	-0.8	13.39	275.66	+22.18	-13.27	+24.57	83.09
2421653.5	5.77	0.8	13.47	275.33	22.20	12.46	24.59	83.53
2421654.5	5.74	0.8	13.54	275.00	22.21	11.64	24.62	83.96
2421655.5	5.72	0.9	13.61	274.65	22.23	10.81	24.64	84.40
2421656.5	5.69	0.9	13.67	274.29	22.25	9.96	24.66	84.84
2421657.5	5.66	-0.9	13.74	273.92	+22.26	- 9.11	+24.67	85.28
2421658.5	5.64	0.9	13.79	273.54	22.28	8.25	24.69	85.72
2421659.5	5.62	0.9	13.85	273.16	22.30	7.38	24.70	86.16
2421660.5	5.60	1.0	13.90	272.77	22.32	6.51	24.72	86.60
2421661.5	5.58	1.0	13.94	272.37	22.34	5.62	24.73	87.04
2421662.5	5.56	-1.0	13.98	271.96	+22.36	- 4.74	+24.74	87.48
2421663.5	5.55	1.0	14.02	271.55	22.39	3.84	24.75	87.92
2421664.5	5.53	1.0	14.05	271.14	22.41	2.94	24.75	88.36
2421665.5	5.52	1.0	14.08	270.72	22.43	2.04	24.76	88.80
2421666.5	5.51	1.1	14.11	270.30	22.46	1.13	24.76	89.25
2421667.5	5.51	-1.1	14.13	269.87	+22.48	- 0.22	+24.76	89.69
2421668.5	5.50	1.1	14.14	269.45	22.50	+ 0.69	24.76	90.13
2421669.5	5.50	1.1	14.15	269.03	22.53	1.60	24.76	90.57
2421670.5	5.50	1.1	14.15	268.60	22.55	2.51	24.76	91.01
2421671.5	5.50	1.0	14.15	268.18	22.58	3.42	24.75	91.45
2421672.5	5.50	-1.0	14.15	267.76	+22.60	+ 4.33	+24.75	91.90
2421673.5	5.50	1.0	14.14	267.34	22.63	5.24	24.74	92.34
2421674.5	5.51	1.0	14.12	266.92	22.65	6.14	24.73	92.78
2421675.5	5.51	1.0	14.11	266.52	22.68	7.04	24.72	93.23
2421676.5	5.52	1.0	14.08	266.11	22.70	7.93	24.71	93.67
2421677.5	5.53	-1.0	14.06	265.71	+22.73	+ 8.82	+24.69	94.11
2421678.5	5.55	1.0	14.02	265.32	22.75	9.70	24.68	94.56
2421679.5	5.56	0.9	13.99	264.93	22.78	10.57	24.66	95.00
2421680.5	5.58	0.9	13.95	264.56	22.81	11.44	24.64	95.45
2421681.5	5.59	0.9	13.91	264.19	22.83	12.30	24.62	95.89
2421682.5	5.61	-0.9	13.86	263.83	+22.86	+13.14	+24.60	96.34
2421683.5	5.63	0.9	13.81	263.48	22.89	13.98	24.58	96.78
2421684.5	5.65	0.9	13.75	263.14	22.91	14.81	24.55	97.23
2421685.5	5.68	0.8	13.69	262.81	22.94	15.63	24.53	97.68
2421686.5	5.70	0.8	13.63	262.49	22.97	16.44	24.50	98.12
2421687.5	5.73	-0.8	13.57	262.18	+23.00	+17.24	+24.47	98.57
2421688.5	5.76	0.8	13.50	261.89	23.03	18.02	24.44	99.02
2421689.5	5.79	0.8	13.43	261.60	23.06	18.80	24.40	99.46
2421690.5	5.82	0.7	13.36	261.33	23.09	19.56	24.37	99.91
2421691.5	5.85	0.7	13.29	261.08	23.12	20.31	24.33	100.36
2421692.5	5.89	-0.7	13.21	260.83	+23.15	+21.04	+24.29	100.81
2421693.5	5.92	0.7	13.13	260.60	23.18	21.76	24.26	101.26
2421694.5	5.96	0.6	13.05	260.38	23.21	22.47	24.21	101.71
2421695.5	6.00	0.6	12.97	260.18	23.25	23.17	24.17	102.16
2421696.5	6.04	0.6	12.89	259.99	23.28	23.85	24.13	102.61
2421697.5	6.08	-0.6	12.80	259.81	+23.32	+24.51	+24.08	103.06

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2421637.5	0.964	22.02	0.44	288.92	28.52	271.11	271.18	6 04.7	6 04.3
2421638.5	0.965	21.46	0.42	288.72	28.47	262.15	262.22	6 41.4	6 41.1
2421639.5	0.967	20.89	0.40	288.49	28.41	253.20	253.27	7 18.1	7 17.8
2421640.5	0.969	20.31	0.38	288.26	28.34	244.27	244.34	7 54.7	7 54.4
2421641.5	0.971	19.72	0.36	288.01	28.27	235.35	235.42	8 31.3	8 31.0
2421642.5	0.972	19.11	0.34	287.74	28.19	226.44	226.52	9 07.8	9 07.5
2421643.5	0.974	18.49	0.33	287.45	28.10	217.55	217.62	9 44.2	9 43.9
2421644.5	0.976	17.86	0.31	287.15	28.01	208.67	208.74	10 20.6	10 20.3
2421645.5	0.978	17.22	0.29	286.81	27.92	199.80	199.88	10 57.0	10 56.6
2421646.5	0.979	16.56	0.27	286.45	27.81	190.95	191.02	11 33.2	11 32.9
2421647.5	0.981	15.89	0.25	286.05	27.71	182.10	182.18	12 09.5	12 09.2
2421648.5	0.982	15.22	0.23	285.62	27.59	173.28	173.35	12 45.7	12 45.3
2421649.5	0.984	14.53	0.21	285.15	27.47	164.46	164.53	13 21.8	13 21.5
2421650.5	0.986	13.83	0.19	284.62	27.35	155.65	155.73	13 57.9	13 57.5
2421651.5	0.987	13.12	0.17	284.04	27.21	146.86	146.94	14 33.9	14 33.6
2421652.5	0.988	12.40	0.16	283.39	27.08	138.08	138.15	15 09.9	15 09.6
2421653.5	0.990	11.67	0.14	282.65	26.93	129.30	129.38	15 45.8	15 45.5
2421654.5	0.991	10.94	0.12	281.82	26.79	120.54	120.62	16 21.7	16 21.4
2421655.5	0.992	10.19	0.11	280.86	26.63	111.79	111.87	16 57.5	16 57.2
2421656.5	0.993	9.44	0.09	279.74	26.47	103.05	103.13	17 33.4	17 33.0
2421657.5	0.994	8.69	0.08	278.43	26.31	94.32	94.39	18 09.1	18 08.8
2421658.5	0.995	7.94	0.07	276.87	26.14	85.59	85.67	18 44.9	18 44.6
2421659.5	0.996	7.18	0.05	274.97	25.97	76.87	76.95	19 20.6	19 20.3
2421660.5	0.997	6.42	0.04	272.63	25.79	68.16	68.24	19 56.3	19 56.0
2421661.5	0.998	5.68	0.03	269.66	25.61	59.46	59.53	20 31.9	20 31.6
2421662.5	0.998	4.94	0.03	265.79	25.43	50.76	50.83	21 07.6	21 07.3
2421663.5	0.999	4.23	0.02	260.60	25.24	42.06	42.14	21 43.2	21 42.9
2421664.5	0.999	3.57	0.01	253.39	25.05	33.37	33.45	22 18.8	22 18.5
2421665.5	0.999	2.98	0.01	243.10	24.85	24.69	24.76	22 54.4	22 54.1
2421666.5	1.000	2.53	0.01	228.48	24.65	16.00	16.08	23 30.0	23 29.7
2421667.5	1.000	2.29	0.01	209.31	24.46	7.32	7.39	.. .. .	.. .. .
2421668.5	1.000	2.35	0.01	188.61	24.26	358.64	358.71	0 05.6	0 05.3
2421669.5	0.999	2.68	0.01	170.97	24.05	349.95	350.03	0 41.2	0 40.9
2421670.5	0.999	3.19	0.01	158.08	23.85	341.27	341.35	1 16.8	1 16.5
2421671.5	0.999	3.82	0.02	149.07	23.65	332.58	332.66	1 52.4	1 52.1
2421672.5	0.998	4.52	0.02	142.69	23.44	323.90	323.97	2 28.0	2 27.7
2421673.5	0.998	5.25	0.03	138.05	23.24	315.21	315.28	3 03.6	3 03.3
2421674.5	0.997	6.00	0.04	134.54	23.04	306.51	306.59	3 39.3	3 38.9
2421675.5	0.997	6.76	0.05	131.82	22.84	297.81	297.89	4 14.9	4 14.6
2421676.5	0.996	7.54	0.06	129.65	22.64	289.11	289.18	4 50.6	4 50.3
2421677.5	0.995	8.31	0.07	127.87	22.44	280.39	280.47	5 26.3	5 26.0
2421678.5	0.994	9.09	0.09	126.40	22.25	271.67	271.75	6 02.1	6 01.8
2421679.5	0.993	9.86	0.10	125.15	22.05	262.95	263.02	6 37.9	6 37.5
2421680.5	0.991	10.63	0.12	124.08	21.86	254.21	254.29	7 13.7	7 13.4
2421681.5	0.990	11.40	0.14	123.16	21.68	245.47	245.55	7 49.5	7 49.2
2421682.5	0.989	12.16	0.16	122.34	21.49	236.72	236.79	8 25.4	8 25.1
2421683.5	0.987	12.91	0.17	121.63	21.32	227.95	228.03	9 01.4	9 01.1
2421684.5	0.986	13.66	0.19	120.99	21.14	219.18	219.26	9 37.4	9 37.1
2421685.5	0.984	14.40	0.22	120.41	20.97	210.40	210.47	10 13.4	10 13.1
2421686.5	0.983	15.12	0.24	119.89	20.81	201.60	201.68	10 49.5	10 49.2
2421687.5	0.981	15.84	0.26	119.42	20.65	192.79	192.87	11 25.6	11 25.3
2421688.5	0.979	16.55	0.28	118.99	20.50	183.97	184.05	12 01.8	12 01.5
2421689.5	0.978	17.25	0.30	118.59	20.35	175.14	175.22	12 38.1	12 37.7
2421690.5	0.976	17.94	0.32	118.23	20.21	166.30	166.37	13 14.4	13 14.0
2421691.5	0.974	18.62	0.35	117.89	20.07	157.44	157.52	13 50.7	13 50.4
2421692.5	0.972	19.29	0.37	117.58	19.94	148.57	148.64	14 27.1	14 26.8
2421693.5	0.970	19.94	0.39	117.29	19.82	139.68	139.76	15 03.6	15 03.3
2421694.5	0.968	20.58	0.42	117.02	19.71	130.78	130.86	15 40.1	15 39.8
2421695.5	0.966	21.21	0.44	116.77	19.60	121.87	121.94	16 16.7	16 16.4
2421696.5	0.964	21.83	0.46	116.54	19.50	112.94	113.02	16 53.4	16 53.1
2421697.5	0.962	22.44	0.48	116.32	19.40	104.00	104.08	17 30.1	17 29.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2422405.5	5.95	-0.6	13.08	316.81	+15.51	-22.15	+22.74	112.63
2422406.5	5.89	0.7	13.20	316.72	15.55	21.57	22.66	113.09
2422407.5	5.84	0.7	13.32	316.62	15.60	20.98	22.58	113.55
2422408.5	5.79	0.7	13.44	316.51	15.65	20.38	22.50	114.01
2422409.5	5.73	0.8	13.56	316.38	15.70	19.76	22.41	114.47
2422410.5	5.68	-0.8	13.68	316.25	+15.76	-19.13	+22.32	114.94
2422411.5	5.63	0.8	13.80	316.10	15.83	18.49	22.23	115.40
2422412.5	5.59	0.9	13.92	315.93	15.90	17.84	22.14	115.86
2422413.5	5.54	0.9	14.04	315.76	15.97	17.17	22.05	116.33
2422414.5	5.50	0.9	14.15	315.57	16.05	16.50	21.96	116.79
2422415.5	5.45	-0.9	14.27	315.38	+16.14	-15.81	+21.86	117.25
2422416.5	5.41	1.0	14.38	315.17	16.22	15.11	21.76	117.72
2422417.5	5.37	1.0	14.49	314.95	16.32	14.40	21.67	118.19
2422418.5	5.33	1.0	14.60	314.71	16.42	13.68	21.57	118.65
2422419.5	5.29	1.1	14.71	314.47	16.52	12.94	21.46	119.12
2422420.5	5.25	-1.1	14.81	314.22	+16.62	-12.20	+21.36	119.59
2422421.5	5.22	1.1	14.91	313.95	16.73	11.44	21.26	120.06
2422422.5	5.18	1.1	15.01	313.68	16.85	10.68	21.15	120.52
2422423.5	5.15	1.2	15.10	313.39	16.96	9.90	21.04	120.99
2422424.5	5.12	1.2	15.19	313.10	17.09	9.12	20.93	121.46
2422425.5	5.09	-1.2	15.28	312.79	+17.21	- 8.33	+20.82	121.93
2422426.5	5.06	1.2	15.36	312.48	17.34	7.52	20.71	122.41
2422427.5	5.04	1.3	15.44	312.16	17.47	6.71	20.60	122.88
2422428.5	5.01	1.3	15.52	311.83	17.60	5.90	20.48	123.35
2422429.5	4.99	1.3	15.59	311.49	17.74	5.07	20.36	123.82
2422430.5	4.97	-1.3	15.65	311.15	+17.88	- 4.24	+20.25	124.30
2422431.5	4.95	1.4	15.72	310.80	18.02	3.40	20.13	124.77
2422432.5	4.93	1.4	15.77	310.45	18.16	2.56	20.00	125.25
2422433.5	4.91	1.4	15.83	310.09	18.30	1.72	19.88	125.72
2422434.5	4.90	1.4	15.87	309.73	18.45	0.87	19.76	126.20
2422435.5	4.89	-1.4	15.91	309.37	+18.59	- 0.01	+19.63	126.67
2422436.5	4.88	1.4	15.95	309.00	18.74	+ 0.84	19.50	127.15
2422437.5	4.87	1.4	15.98	308.63	18.89	1.70	19.37	127.63
2422438.5	4.86	1.4	16.01	308.26	19.03	2.56	19.24	128.11
2422439.5	4.85	1.4	16.03	307.89	19.18	3.42	19.11	128.59
2422440.5	4.85	-1.4	16.04	307.52	+19.33	+ 4.27	+18.98	129.07
2422441.5	4.85	1.4	16.05	307.16	19.47	5.13	18.84	129.55
2422442.5	4.84	1.4	16.05	306.79	19.61	5.98	18.71	130.03
2422443.5	4.85	1.4	16.05	306.43	19.76	6.83	18.57	130.51
2422444.5	4.85	1.4	16.04	306.07	19.90	7.68	18.43	131.00
2422445.5	4.85	-1.3	16.03	305.72	+20.04	+ 8.52	+18.29	131.48
2422446.5	4.86	1.3	16.02	305.37	20.18	9.35	18.15	131.96
2422447.5	4.86	1.3	15.99	305.02	20.31	10.19	18.00	132.45
2422448.5	4.87	1.3	15.97	304.69	20.44	11.01	17.86	132.93
2422449.5	4.88	1.3	15.93	304.36	20.58	11.83	17.71	133.42
2422450.5	4.89	-1.3	15.90	304.03	+20.70	+12.64	+17.56	133.91
2422451.5	4.90	1.3	15.86	303.72	20.83	13.44	17.42	134.39
2422452.5	4.92	1.2	15.81	303.41	20.95	14.23	17.26	134.88
2422453.5	4.93	1.2	15.76	303.12	21.07	15.01	17.11	135.37
2422454.5	4.95	1.2	15.71	302.83	21.19	15.79	16.96	135.86
2422455.5	4.97	-1.2	15.65	302.55	+21.30	+16.55	+16.80	136.35
2422456.5	4.99	1.2	15.59	302.29	21.41	17.30	16.65	136.85
2422457.5	5.01	1.2	15.52	302.04	21.52	18.04	16.49	137.34
2422458.5	5.03	1.1	15.45	301.79	21.63	18.77	16.33	137.83
2422459.5	5.06	1.1	15.38	301.56	21.73	19.49	16.17	138.32
2422460.5	5.08	-1.1	15.31	301.34	+21.82	+20.19	+16.01	138.82
2422461.5	5.11	1.1	15.23	301.14	21.92	20.88	15.85	139.31
2422462.5	5.13	1.1	15.15	300.95	22.00	21.56	15.68	139.81
2422463.5	5.16	1.0	15.06	300.77	22.09	22.23	15.52	140.31
2422464.5	5.19	1.0	14.98	300.60	22.17	22.88	15.35	140.80
2422465.5	5.22	-1.0	14.89	300.45	+22.25	+23.52	+15.18	141.30

Julian Day	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2422405.5	0.963	22.10	0.48	285.62	38.12	78.54	78.62	19 14.7	19 14.4
2422406.5	0.965	21.55	0.46	285.54	38.12	69.54	69.62	19 51.6	19 51.3
2422407.5	0.967	20.99	0.44	285.46	38.11	60.54	60.62	20 28.5	20 28.1
2422408.5	0.969	20.41	0.42	285.37	38.11	51.56	51.64	21 05.3	21 04.9
2422409.5	0.970	19.82	0.40	285.28	38.10	42.59	42.67	21 42.0	21 41.7
2422410.5	0.972	19.21	0.38	285.19	38.10	33.63	33.71	22 18.7	22 18.4
2422411.5	0.974	18.59	0.36	285.09	38.09	24.68	24.77	22 55.4	22 55.1
2422412.5	0.976	17.96	0.34	284.99	38.08	15.75	15.83	23 32.0	23 31.7
2422413.5	0.977	17.32	0.32	284.88	38.07	6.83	6.91	.. ...	.. .. .
2422414.5	0.979	16.66	0.30	284.76	38.06	357.92	358.00	0 08.5	0 08.2
2422415.5	0.981	15.99	0.28	284.63	38.05	349.02	349.10	0 45.0	0 44.7
2422416.5	0.982	15.31	0.26	284.48	38.03	340.13	340.21	1 21.5	1 21.2
2422417.5	0.984	14.61	0.23	284.32	38.02	331.25	331.33	1 57.9	1 57.6
2422418.5	0.985	13.90	0.21	284.15	38.00	322.39	322.47	2 34.3	2 33.9
2422419.5	0.987	13.19	0.19	283.95	37.99	313.53	313.61	3 10.6	3 10.2
2422420.5	0.988	12.46	0.17	283.72	37.97	304.69	304.77	3 46.8	3 46.5
2422421.5	0.990	11.72	0.16	283.46	37.94	295.85	295.93	4 23.0	4 22.7
2422422.5	0.991	10.96	0.14	283.16	37.92	287.03	287.11	4 59.2	4 58.9
2422423.5	0.992	10.20	0.12	282.80	37.90	278.21	278.29	5 35.4	5 35.0
2422424.5	0.993	9.43	0.10	282.38	37.87	269.41	269.49	6 11.5	6 11.1
2422425.5	0.994	8.65	0.09	281.87	37.84	260.61	260.69	6 47.5	6 47.2
2422426.5	0.995	7.86	0.07	281.26	37.81	251.82	251.90	7 23.5	7 23.2
2422427.5	0.996	7.07	0.06	280.48	37.78	243.04	243.12	7 59.5	7 59.2
2422428.5	0.997	6.27	0.05	279.49	37.75	234.27	234.35	8 35.5	8 35.2
2422429.5	0.998	5.46	0.04	278.19	37.71	225.50	225.58	9 11.4	9 11.1
2422430.5	0.998	4.65	0.03	276.40	37.67	216.74	216.82	9 47.3	9 47.0
2422431.5	0.999	3.84	0.02	273.83	37.63	207.98	208.07	10 23.2	10 22.9
2422432.5	0.999	3.04	0.01	269.85	37.59	199.23	199.31	10 59.1	10 58.7
2422433.5	1.000	2.26	0.01	262.98	37.54	190.49	190.57	11 34.9	11 34.6
2422434.5	1.000	1.54	0.00	249.19	37.49	181.74	181.83	12 10.8	12 10.4
2422435.5	1.000	1.03	0.00	217.69	37.44	173.00	173.09	12 46.6	12 46.3
2422436.5	1.000	1.11	0.00	170.94	37.39	164.26	164.35	13 22.4	13 22.1
2422437.5	1.000	1.68	0.00	144.35	37.34	155.53	155.61	13 58.2	13 57.9
2422438.5	1.000	2.43	0.01	132.61	37.29	146.79	146.87	14 34.0	14 33.7
2422439.5	0.999	3.23	0.01	126.54	37.23	138.05	138.14	15 09.9	15 09.5
2422440.5	0.999	4.06	0.02	122.94	37.17	129.32	129.40	15 45.7	15 45.4
2422441.5	0.998	4.89	0.03	120.57	37.11	120.58	120.66	16 21.5	16 21.2
2422442.5	0.998	5.73	0.04	118.91	37.05	111.83	111.92	16 57.4	16 57.0
2422443.5	0.997	6.57	0.05	117.69	36.99	103.09	103.17	17 33.2	17 32.9
2422444.5	0.996	7.40	0.07	116.76	36.93	94.34	94.42	18 09.1	18 08.8
2422445.5	0.995	8.24	0.08	116.02	36.87	85.58	85.67	18 45.0	18 44.7
2422446.5	0.994	9.07	0.10	115.44	36.81	76.82	76.91	19 21.0	19 20.6
2422447.5	0.993	9.90	0.12	114.96	36.74	68.06	68.14	19 56.9	19 56.6
2422448.5	0.991	10.72	0.14	114.57	36.68	59.28	59.37	20 32.9	20 32.6
2422449.5	0.990	11.54	0.16	114.23	36.62	50.50	50.59	21 09.0	21 08.6
2422450.5	0.988	12.35	0.18	113.95	36.55	41.71	41.80	21 45.0	21 44.7
2422451.5	0.987	13.15	0.21	113.71	36.49	32.92	33.00	22 21.1	22 20.8
2422452.5	0.985	13.94	0.23	113.51	36.43	24.11	24.19	22 57.3	22 56.9
2422453.5	0.984	14.73	0.26	113.33	36.37	15.30	15.38	23 33.5	23 33.1
2422454.5	0.982	15.51	0.29	113.17	36.31	6.47	6.55	.. .. .	.. ...
2422455.5	0.980	16.27	0.31	113.03	36.25	357.63	357.72	0 09.7	0 09.4
2422456.5	0.978	17.03	0.34	112.91	36.20	348.79	348.87	0 46.0	0 45.6
2422457.5	0.976	17.78	0.37	112.80	36.14	339.93	340.01	1 22.3	1 22.0
2422458.5	0.974	18.51	0.40	112.71	36.09	331.06	331.14	1 58.7	1 58.4
2422459.5	0.972	19.24	0.43	112.62	36.04	322.17	322.26	2 35.1	2 34.8
2422460.5	0.970	19.95	0.46	112.54	35.99	313.28	313.36	3 11.6	3 11.3
2422461.5	0.968	20.65	0.49	112.47	35.95	304.37	304.45	3 48.2	3 47.8
2422462.5	0.966	21.34	0.52	112.41	35.90	295.45	295.53	4 24.8	4 24.5
2422463.5	0.964	22.02	0.55	112.35	35.86	286.51	286.59	5 01.5	5 01.1
2422464.5	0.961	22.69	0.58	112.30	35.83	277.56	277.64	5 38.2	5 37.8
2422465.5	0.959	23.34	0.61	112.25	35.79	268.60	268.68	6 15.0	6 14.6

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2423186.5	4.74	-1.3	16.40	1.04	− 0.39	−20.47	+ 8.72	158.77
2423187.5	4.70	1.3	16.56	1.02	0.31	19.96	8.51	159.30
2423188.5	4.65	1.3	16.73	0.99	0.23	19.43	8.30	159.83
2423189.5	4.60	1.4	16.89	0.94	0.15	18.89	8.09	160.36
2423190.5	4.56	1.4	17.06	0.89	− 0.06	18.35	7.88	160.89
2423191.5	4.52	-1.4	17.22	0.82	+ 0.04	−17.79	+ 7.67	161.43
2423192.5	4.47	1.5	17.38	0.74	0.14	17.22	7.45	161.96
2423193.5	4.43	1.5	17.55	0.65	0.25	16.64	7.24	162.49
2423194.5	4.39	1.5	17.71	0.55	0.37	16.04	7.02	163.03
2423195.5	4.35	1.6	17.86	0.44	0.49	15.44	6.81	163.56
2423196.5	4.32	-1.6	18.02	0.32	+ 0.62	−14.82	+ 6.59	164.10
2423197.5	4.28	1.6	18.17	0.19	0.75	14.20	6.37	164.64
2423198.5	4.24	1.7	18.33	0.04	0.89	13.56	6.15	165.17
2423199.5	4.21	1.7	18.47	359.89	1.04	12.91	5.93	165.71
2423200.5	4.18	1.7	18.62	359.73	1.19	12.25	5.71	166.25
2423201.5	4.15	-1.8	18.76	359.56	+ 1.34	−11.58	+ 5.49	166.80
2423202.5	4.12	1.8	18.90	359.37	1.50	10.90	5.27	167.34
2423203.5	4.09	1.8	19.03	359.18	1.67	10.22	5.04	167.88
2423204.5	4.06	1.8	19.16	358.98	1.83	9.52	4.82	168.43
2423205.5	4.03	1.9	19.29	358.77	2.01	8.81	4.60	168.97
2423206.5	4.01	-1.9	19.41	358.56	+ 2.18	− 8.10	+ 4.37	169.52
2423207.5	3.98	1.9	19.53	358.33	2.36	7.37	4.15	170.06
2423208.5	3.96	1.9	19.64	358.10	2.54	6.64	3.92	170.61
2423209.5	3.94	2.0	19.74	357.87	2.73	5.91	3.69	171.16
2423210.5	3.92	2.0	19.84	357.62	2.92	5.16	3.46	171.71
2423211.5	3.90	-2.0	19.93	357.38	+ 3.11	− 4.41	+ 3.23	172.26
2423212.5	3.89	2.0	20.02	357.12	3.30	3.66	3.00	172.81
2423213.5	3.87	2.1	20.10	356.87	3.49	2.89	2.77	173.36
2423214.5	3.85	2.1	20.17	356.60	3.68	2.13	2.54	173.92
2423215.5	3.84	2.1	20.24	356.34	3.88	1.36	2.31	174.47
2423216.5	3.83	-2.1	20.30	356.07	+ 4.07	− 0.59	+ 2.08	175.03
2423217.5	3.82	2.1	20.35	355.80	4.27	+ 0.19	1.85	175.59
2423218.5	3.81	2.1	20.40	355.53	4.46	0.96	1.61	176.14
2423219.5	3.80	2.1	20.44	355.26	4.65	1.74	1.38	176.70
2423220.5	3.80	2.1	20.47	354.99	4.84	2.52	1.15	177.26
2423221.5	3.79	-2.1	20.50	354.72	+ 5.03	+ 3.30	+ 0.91	177.82
2423222.5	3.79	2.1	20.52	354.45	5.22	4.08	0.68	178.38
2423223.5	3.79	2.1	20.53	354.18	5.41	4.86	0.44	178.94
2423224.5	3.79	2.1	20.53	353.92	5.59	5.64	+ 0.21	179.51
2423225.5	3.79	2.0	20.52	353.65	5.77	6.41	− 0.03	180.07
2423226.5	3.79	-2.0	20.51	353.40	+ 5.94	+ 7.18	− 0.27	180.64
2423227.5	3.79	2.0	20.50	353.14	6.11	7.95	0.50	181.20
2423228.5	3.80	2.0	20.47	352.89	6.28	8.71	0.74	181.77
2423229.5	3.80	2.0	20.44	352.65	6.44	9.47	0.98	182.34
2423230.5	3.81	2.0	20.40	352.41	6.60	10.23	1.22	182.90
2423231.5	3.82	-2.0	20.36	352.18	+ 6.75	+10.97	− 1.45	183.47
2423232.5	3.83	1.9	20.30	351.96	6.90	11.72	1.69	184.04
2423233.5	3.84	1.9	20.25	351.74	7.04	12.45	1.93	184.62
2423234.5	3.85	1.9	20.19	351.54	7.17	13.18	2.17	185.19
2423235.5	3.87	1.9	20.12	351.34	7.30	13.90	2.41	185.76
2423236.5	3.88	-1.9	20.04	351.15	+ 7.42	+14.61	− 2.65	186.34
2423237.5	3.90	1.9	19.96	350.97	7.53	15.31	2.89	186.91
2423238.5	3.91	1.8	19.88	350.81	7.64	16.00	3.13	187.49
2423239.5	3.93	1.8	19.79	350.65	7.74	16.68	3.37	188.07
2423240.5	3.95	1.8	19.70	350.50	7.84	17.36	3.61	188.64
2423241.5	3.97	-1.8	19.61	350.37	+ 7.92	+18.02	− 3.85	189.22
2423242.5	3.99	1.8	19.51	350.24	8.00	18.67	4.09	189.80
2423243.5	4.01	1.7	19.40	350.13	8.07	19.32	4.33	190.38
2423244.5	4.03	1.7	19.30	350.03	8.14	19.95	4.57	190.97
2423245.5	4.05	1.7	19.19	349.94	8.20	20.57	4.81	191.55
2423246.5	4.08	-1.7	19.07	349.86	+ 8.25	+21.18	− 5.05	192.13

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2423186.5	0.963	22.33	0.61	273.81	28.35	121.23	121.31	16 19.8	16 19.4
2423187.5	0.964	21.75	0.59	273.98	28.38	112.15	112.24	16 57.0	16 56.6
2423188.5	0.966	21.16	0.56	274.17	28.41	103.09	103.18	17 34.1	17 33.8
2423189.5	0.968	20.55	0.54	274.38	28.45	94.04	94.12	18 11.3	18 10.9
2423190.5	0.970	19.93	0.51	274.61	28.49	85.00	85.08	18 48.3	18 48.0
2423191.5	0.972	19.30	0.48	274.86	28.54	75.96	76.05	19 25.3	19 25.0
2423192.5	0.974	18.65	0.46	275.14	28.59	66.94	67.03	20 02.3	20 01.9
2423193.5	0.976	17.99	0.43	275.44	28.65	57.94	58.02	20 39.2	20 38.9
2423194.5	0.977	17.32	0.40	275.78	28.72	48.94	49.03	21 16.1	21 15.8
2423195.5	0.979	16.64	0.37	276.14	28.79	39.95	40.04	21 52.9	21 52.6
2423196.5	0.981	15.94	0.35	276.55	28.87	30.97	31.06	22 29.7	22 29.4
2423197.5	0.982	15.23	0.32	276.99	28.95	22.01	22.09	23 06.5	23 06.1
2423198.5	0.984	14.51	0.29	277.48	29.04	13.05	13.14	23 43.2	23 42.8
2423199.5	0.986	13.78	0.27	278.03	29.13	4.10	4.19	.. ..	.. ..
2423200.5	0.987	13.03	0.24	278.64	29.23	355.17	355.25	0 19.8	0 19.5
2423201.5	0.989	12.28	0.21	279.33	29.33	346.24	346.32	0 56.4	0 56.1
2423202.5	0.990	11.51	0.19	280.10	29.44	337.32	337.41	1 33.0	1 32.7
2423203.5	0.991	10.74	0.17	280.98	29.55	328.41	328.50	2 09.6	2 09.2
2423204.5	0.992	9.95	0.14	282.00	29.67	319.51	319.60	2 46.1	2 45.7
2423205.5	0.994	9.16	0.12	283.18	29.79	310.62	310.70	3 22.5	3 22.2
2423206.5	0.995	8.37	0.10	284.57	29.91	301.73	301.82	3 59.0	3 58.6
2423207.5	0.996	7.57	0.09	286.25	30.04	292.85	292.94	4 35.4	4 35.0
2423208.5	0.997	6.77	0.07	288.32	30.17	283.98	284.07	5 11.8	5 11.4
2423209.5	0.997	5.97	0.05	290.92	30.30	275.11	275.20	5 48.1	5 47.8
2423210.5	0.998	5.18	0.04	294.29	30.44	266.25	266.34	6 24.4	6 24.1
2423211.5	0.999	4.40	0.03	298.85	30.57	257.40	257.48	7 00.8	7 00.4
2423212.5	0.999	3.66	0.02	305.27	30.71	248.55	248.63	7 37.0	7 36.7
2423213.5	0.999	2.97	0.01	314.78	30.85	239.70	239.79	8 13.3	8 13.0
2423214.5	1.000	2.41	0.01	329.27	30.99	230.86	230.94	8 49.6	8 49.2
2423215.5	1.000	2.07	0.01	350.30	31.13	222.02	222.10	9 25.8	9 25.5
2423216.5	1.000	2.08	0.01	14.96	31.27	213.18	213.26	10 02.1	10 01.7
2423217.5	1.000	2.43	0.01	35.91	31.42	204.34	204.43	10 38.3	10 37.9
2423218.5	0.999	3.01	0.01	50.32	31.56	195.50	195.59	11 14.5	11 14.2
2423219.5	0.999	3.71	0.02	59.78	31.70	186.67	186.76	11 50.8	11 50.4
2423220.5	0.998	4.48	0.03	66.19	31.83	177.83	177.92	12 27.0	12 26.6
2423221.5	0.998	5.28	0.04	70.74	31.97	169.00	169.09	13 03.2	13 02.9
2423222.5	0.997	6.11	0.06	74.13	32.11	160.16	160.25	13 39.5	13 39.1
2423223.5	0.996	6.95	0.08	76.75	32.24	151.32	151.41	14 15.7	14 15.4
2423224.5	0.995	7.79	0.09	78.84	32.37	142.48	142.57	14 52.0	14 51.6
2423225.5	0.994	8.64	0.12	80.55	32.50	133.63	133.72	15 28.3	15 27.9
2423226.5	0.993	9.49	0.14	81.98	32.63	124.78	124.87	16 04.6	16 04.2
2423227.5	0.992	10.34	0.17	83.21	32.75	115.93	116.02	16 40.9	16 40.6
2423228.5	0.991	11.18	0.19	84.27	32.87	107.07	107.16	17 17.3	17 16.9
2423229.5	0.989	12.03	0.22	85.20	32.99	98.20	98.29	17 53.6	17 53.3
2423230.5	0.987	12.86	0.26	86.02	33.10	89.33	89.42	18 30.1	18 29.7
2423231.5	0.986	13.69	0.29	86.76	33.21	80.45	80.54	19 06.5	19 06.1
2423232.5	0.984	14.52	0.32	87.42	33.31	71.56	71.65	19 43.0	19 42.6
2423233.5	0.982	15.33	0.36	88.03	33.41	62.67	62.75	20 19.5	20 19.1
2423234.5	0.980	16.14	0.40	88.58	33.50	53.76	53.85	20 56.1	20 55.7
2423235.5	0.978	16.93	0.44	89.09	33.59	44.85	44.94	21 32.6	21 32.3
2423236.5	0.976	17.72	0.48	89.56	33.68	35.92	36.01	22 09.3	22 08.9
2423237.5	0.974	18.50	0.52	89.99	33.76	26.99	27.08	22 46.0	22 45.6
2423238.5	0.972	19.26	0.56	90.40	33.83	18.05	18.13	23 22.7	23 22.3
2423239.5	0.970	20.02	0.60	90.77	33.90	9.09	9.18	23 59.5	23 59.1
2423240.5	0.968	20.76	0.64	91.12	33.97	0.13	0.21	.. .. ..	.. .. ..
2423241.5	0.965	21.49	0.68	91.44	34.03	351.15	351.24	0 36.3	0 36.0
2423242.5	0.963	22.21	0.72	91.75	34.08	342.16	342.25	1 13.2	1 12.8
2423243.5	0.961	22.92	0.77	92.03	34.13	333.16	333.25	1 50.1	1 49.8
2423244.5	0.958	23.62	0.81	92.30	34.18	324.15	324.23	2 27.1	2 26.7
2423245.5	0.956	24.30	0.85	92.54	34.21	315.12	315.21	3 04.1	3 03.8
2423246.5	0.953	24.97	0.89	92.77	34.25	306.09	306.17	3 41.2	3 40.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	$A_S - A_E$	D_S	L_S
	m		"	°	°	°	°	°
2423991.5	3.56	−2.1	21.87	70.04	−19.20	−25.43	−17.95	227.38
2423992.5	3.53	2.1	22.06	70.04	19.14	24.79	18.14	228.00
2423993.5	3.50	2.1	22.24	70.02	19.08	24.14	18.32	228.63
2423994.5	3.47	2.2	22.42	69.98	19.02	23.47	18.50	229.26
2423995.5	3.44	2.2	22.59	69.93	18.97	22.79	18.68	229.88
2423996.5	3.42	−2.2	22.76	69.87	−18.91	−22.09	−18.86	230.51
2423997.5	3.39	2.2	22.93	69.80	18.85	21.38	19.04	231.14
2423998.5	3.37	2.3	23.10	69.71	18.79	20.65	19.21	231.77
2423999.5	3.35	2.3	23.26	69.60	18.73	19.91	19.38	232.40
2424000.5	3.32	2.3	23.41	69.49	18.67	19.15	19.55	233.03
2424001.5	3.30	−2.3	23.56	69.36	−18.61	−18.37	−19.72	233.66
2424002.5	3.28	2.4	23.71	69.22	18.55	17.59	19.88	234.29
2424003.5	3.26	2.4	23.85	69.06	18.49	16.79	20.05	234.92
2424004.5	3.24	2.4	23.98	68.90	18.43	15.97	20.21	235.55
2424005.5	3.23	2.4	24.11	68.73	18.38	15.15	20.36	236.18
2424006.5	3.21	−2.5	24.23	68.54	−18.32	−14.31	−20.52	236.81
2424007.5	3.19	2.5	24.35	68.34	18.27	13.46	20.67	237.44
2424008.5	3.18	2.5	24.45	68.14	18.21	12.59	20.82	238.07
2424009.5	3.17	2.5	24.55	67.92	18.16	11.72	20.97	238.71
2424010.5	3.16	2.5	24.65	67.70	18.11	10.84	21.12	239.34
2424011.5	3.14	−2.6	24.73	67.47	−18.06	− 9.95	−21.26	239.97
2424012.5	3.13	2.6	24.81	67.23	18.01	9.04	21.40	240.60
2424013.5	3.13	2.6	24.88	66.98	17.96	8.13	21.54	241.24
2424014.5	3.12	2.6	24.94	66.73	17.92	7.22	21.68	241.87
2424015.5	3.11	2.6	24.99	66.47	17.87	6.29	21.81	242.50
2424016.5	3.11	−2.6	25.03	66.21	−17.83	− 5.36	−21.94	243.14
2424017.5	3.10	2.6	25.06	65.94	17.80	4.43	22.07	243.77
2424018.5	3.10	2.7	25.09	65.67	17.76	3.49	22.20	244.41
2424019.5	3.10	2.7	25.10	65.40	17.72	2.54	22.32	245.04
2424020.5	3.10	2.7	25.10	65.13	17.69	1.59	22.44	245.67
2424021.5	3.10	−2.7	25.10	64.85	−17.66	− 0.64	−22.55	246.31
2424022.5	3.10	2.7	25.08	64.58	17.64	+ 0.31	22.67	246.94
2424023.5	3.10	2.7	25.06	64.30	17.61	1.26	22.78	247.58
2424024.5	3.11	2.6	25.03	64.03	17.59	2.21	22.89	248.21
2424025.5	3.11	2.6	24.99	63.75	17.58	3.17	22.99	248.85
2424026.5	3.12	−2.6	24.93	63.48	−17.56	+ 4.12	−23.10	249.48
2424027.5	3.13	2.6	24.87	63.22	17.55	5.06	23.20	250.12
2424028.5	3.14	2.6	24.80	62.96	17.55	6.01	23.29	250.75
2424029.5	3.14	2.6	24.72	62.70	17.54	6.95	23.39	251.39
2424030.5	3.16	2.6	24.64	62.45	17.54	7.88	23.48	252.02
2424031.5	3.17	−2.5	24.54	62.21	−17.55	+ 8.81	−23.57	252.65
2424032.5	3.18	2.5	24.44	61.97	17.55	9.73	23.65	253.29
2424033.5	3.20	2.5	24.33	61.75	17.56	10.64	23.73	253.92
2424034.5	3.21	2.5	24.21	61.53	17.58	11.55	23.81	254.56
2424035.5	3.23	2.5	24.08	61.32	17.60	12.45	23.89	255.19
2424036.5	3.25	−2.4	23.95	61.12	−17.62	+13.34	−23.96	255.83
2424037.5	3.27	2.4	23.81	60.93	17.64	14.21	24.03	256.46
2424038.5	3.29	2.4	23.67	60.76	17.67	15.08	24.10	257.09
2424039.5	3.31	2.4	23.52	60.59	17.71	15.94	24.16	257.73
2424040.5	3.33	2.3	23.36	60.43	17.74	16.79	24.22	258.36
2424041.5	3.35	−2.3	23.20	60.29	−17.79	+17.62	−24.28	259.00
2424042.5	3.38	2.3	23.03	60.16	17.83	18.45	24.33	259.63
2424043.5	3.40	2.3	22.87	60.04	17.88	19.26	24.38	260.26
2424044.5	3.43	2.2	22.69	59.93	17.93	20.06	24.43	260.89
2424045.5	3.45	2.2	22.52	59.84	17.99	20.85	24.47	261.53
2424046.5	3.48	−2.2	22.34	59.76	−18.05	+21.62	−24.52	262.16
2424047.5	3.51	2.1	22.15	59.69	18.11	22.38	24.55	262.79
2424048.5	3.54	2.1	21.97	59.63	18.17	23.13	24.59	263.42
2424049.5	3.57	2.1	21.78	59.59	18.24	23.87	24.62	264.06
2424050.5	3.60	2.1	21.59	59.56	18.31	24.59	24.65	264.69
2424051.5	3.63	−2.0	21.40	59.54	−18.39	+25.30	−24.67	265.32

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2423991.5	0.956	24.11	0.95	256.93	345.73	280.54	280.63	5 26.1	5 25.7
2423992.5	0.959	23.49	0.91	257.34	345.73	271.45	271.54	6 03.4	6 03.0
2423993.5	0.961	22.86	0.87	257.78	345.74	262.37	262.46	6 40.6	6 40.2
2423994.5	0.963	22.21	0.83	258.25	345.75	253.30	253.39	7 17.8	7 17.4
2423995.5	0.965	21.56	0.79	258.76	345.77	244.25	244.34	7 54.9	7 54.6
2423996.5	0.967	20.89	0.75	259.30	345.81	235.21	235.30	8 32.0	8 31.6
2423997.5	0.969	20.21	0.71	259.89	345.85	226.18	226.27	9 09.0	9 08.6
2423998.5	0.971	19.52	0.66	260.52	345.89	217.17	217.26	9 46.0	9 45.6
2423999.5	0.973	18.81	0.62	261.20	345.95	208.17	208.26	10 22.9	10 22.5
2424000.5	0.975	18.10	0.58	261.94	346.01	199.18	199.27	10 59.7	10 59.3
2424001.5	0.977	17.38	0.54	262.75	346.08	190.21	190.30	11 36.5	11 36.1
2424002.5	0.979	16.65	0.50	263.63	346.16	181.25	181.34	12 13.2	12 12.9
2424003.5	0.981	15.91	0.46	264.60	346.25	172.30	172.39	12 49.9	12 49.6
2424004.5	0.983	15.17	0.42	265.66	346.34	163.36	163.45	13 26.6	13 26.2
2424005.5	0.984	14.42	0.38	266.84	346.44	154.43	154.52	14 03.2	14 02.8
2424006.5	0.986	13.66	0.34	268.14	346.54	145.51	145.60	14 39.7	14 39.4
2424007.5	0.987	12.90	0.31	269.61	346.65	136.60	136.69	15 16.2	15 15.9
2424008.5	0.989	12.15	0.27	271.25	346.77	127.70	127.79	15 52.7	15 52.3
2424009.5	0.990	11.39	0.24	273.11	346.89	118.81	118.91	16 29.1	16 28.8
2424010.5	0.991	10.64	0.21	275.24	347.02	109.93	110.02	17 05.5	17 05.2
2424011.5	0.993	9.89	0.18	277.68	347.15	101.06	101.15	17 41.9	17 41.5
2424012.5	0.994	9.16	0.16	280.52	347.29	92.19	92.28	18 18.3	18 17.9
2424013.5	0.995	8.45	0.13	283.84	347.43	83.33	83.42	18 54.6	18 54.2
2424014.5	0.995	7.76	0.11	287.76	347.58	74.48	74.57	19 30.9	19 30.5
2424015.5	0.996	7.11	0.10	292.41	347.73	65.63	65.72	20 07.1	20 06.8
2424016.5	0.997	6.50	0.08	297.96	347.88	56.78	56.87	20 43.4	20 43.0
2424017.5	0.997	5.96	0.07	304.57	348.04	47.94	48.03	21 19.6	21 19.3
2424018.5	0.998	5.51	0.06	312.36	348.20	39.11	39.20	21 55.9	21 55.5
2424019.5	0.998	5.18	0.05	321.35	348.36	30.27	30.36	22 32.1	22 31.7
2424020.5	0.998	4.97	0.05	331.32	348.52	21.44	21.53	23 08.3	23 07.9
2424021.5	0.998	4.93	0.05	341.80	348.69	12.61	12.70	23 44.5	23 44.2
2424022.5	0.998	5.04	0.05	352.14	348.85	3.77	3.86	.. .. ..	.. .. ..
2424023.5	0.998	5.30	0.05	1.75	349.02	354.94	355.03	0 20.8	0 20.4
2424024.5	0.998	5.69	0.06	10.27	349.18	346.11	346.20	0 57.0	0 56.6
2424025.5	0.997	6.18	0.07	17.57	349.34	337.27	337.36	1 33.2	1 32.8
2424026.5	0.997	6.75	0.09	23.73	349.51	328.43	328.52	2 09.5	2 09.1
2424027.5	0.996	7.37	0.10	28.89	349.67	319.58	319.67	2 45.7	2 45.4
2424028.5	0.995	8.05	0.12	33.23	349.83	310.73	310.82	3 22.0	3 21.7
2424029.5	0.994	8.75	0.14	36.89	349.98	301.88	301.97	3 58.4	3 58.0
2424030.5	0.993	9.47	0.17	40.00	350.13	293.02	293.11	4 34.7	4 34.3
2424031.5	0.992	10.21	0.19	42.67	350.28	284.15	284.24	5 11.1	5 10.7
2424032.5	0.991	10.96	0.22	44.98	350.43	275.27	275.36	5 47.5	5 47.1
2424033.5	0.990	11.71	0.25	46.99	350.57	266.39	266.48	6 23.9	6 23.6
2424034.5	0.988	12.47	0.29	48.76	350.70	257.49	257.59	7 00.4	7 00.0
2424035.5	0.987	13.22	0.32	50.33	350.83	248.59	248.68	7 36.9	7 36.6
2424036.5	0.985	13.98	0.35	51.73	350.95	239.68	239.77	8 13.5	8 13.2
2424037.5	0.984	14.73	0.39	52.98	351.07	230.75	230.84	8 50.1	8 49.8
2424038.5	0.982	15.47	0.43	54.11	351.18	221.82	221.91	9 26.8	9 26.4
2424039.5	0.980	16.21	0.47	55.13	351.29	212.87	212.96	10 03.5	10 03.2
2424040.5	0.978	16.94	0.51	56.06	351.38	203.91	204.00	10 40.3	10 39.9
2424041.5	0.976	17.67	0.55	56.91	351.48	194.95	195.04	11 17.1	11 16.7
2424042.5	0.974	18.38	0.59	57.69	351.56	185.96	186.05	11 54.0	11 53.6
2424043.5	0.973	19.08	0.63	58.41	351.64	176.97	177.06	12 30.9	12 30.5
2424044.5	0.971	19.78	0.67	59.07	351.70	167.96	168.05	13 07.9	13 07.5
2424045.5	0.968	20.46	0.71	59.68	351.76	158.94	159.03	13 44.9	13 44.6
2424046.5	0.966	21.13	0.75	60.25	351.82	149.91	150.00	14 22.0	14 21.7
2424047.5	0.964	21.80	0.79	60.77	351.86	140.86	140.95	14 59.2	14 58.8
2424048.5	0.962	22.44	0.83	61.26	351.90	131.80	131.89	15 36.4	15 36.0
2424049.5	0.960	23.08	0.87	61.72	351.93	122.73	122.82	16 13.7	16 13.3
2424050.5	0.958	23.71	0.91	62.14	351.95	113.64	113.73	16 51.0	16 50.6
2424051.5	0.956	24.32	0.95	62.54	351.96	104.54	104.63	17 28.4	17 28.0

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2424793.5	4.12	-1.7	18.88	146.72	-11.75	-25.02	-21.43	299.28
2424794.5	4.10	1.7	18.99	146.64	11.82	24.32	21.30	299.88
2424795.5	4.07	1.7	19.11	146.55	11.90	23.60	21.16	300.48
2424796.5	4.05	1.7	19.22	146.45	11.98	22.88	21.02	301.07
2424797.5	4.02	1.8	19.32	146.33	12.07	22.14	20.88	301.67
2424798.5	4.00	-1.8	19.43	146.20	-12.16	-21.39	-20.74	302.26
2424799.5	3.98	1.8	19.53	146.06	12.26	20.64	20.60	302.86
2424800.5	3.96	1.8	19.62	145.90	12.37	19.87	20.46	303.45
2424801.5	3.94	1.8	19.72	145.74	12.48	19.09	20.31	304.04
2424802.5	3.93	1.9	19.80	145.56	12.60	18.30	20.16	304.63
2424803.5	3.91	-1.9	19.88	145.36	-12.73	-17.50	-20.01	305.22
2424804.5	3.90	1.9	19.96	145.16	12.86	16.69	19.86	305.81
2424805.5	3.88	1.9	20.03	144.94	12.99	15.87	19.70	306.40
2424806.5	3.87	1.9	20.10	144.72	13.13	15.04	19.55	306.99
2424807.5	3.86	2.0	20.16	144.48	13.28	14.20	19.39	307.58
2424808.5	3.85	-2.0	20.21	144.24	-13.43	-13.36	-19.23	308.16
2424809.5	3.84	2.0	20.26	143.98	13.58	12.51	19.07	308.75
2424810.5	3.83	2.0	20.30	143.71	13.74	11.65	18.90	309.33
2424811.5	3.82	2.0	20.33	143.44	13.90	10.79	18.74	309.91
2424812.5	3.82	2.0	20.36	143.16	14.07	9.92	18.57	310.50
2424813.5	3.82	-2.0	20.38	142.87	-14.23	- 9.04	-18.41	311.08
2424814.5	3.81	2.1	20.39	142.58	14.41	8.16	18.24	311.66
2424815.5	3.81	2.1	20.40	142.28	14.58	7.28	18.07	312.24
2424816.5	3.81	2.1	20.40	141.97	14.75	6.39	17.89	312.82
2424817.5	3.81	2.1	20.39	141.66	14.93	5.50	17.72	313.39
2424818.5	3.82	-2.1	20.37	141.34	-15.11	- 4.61	-17.54	313.97
2424819.5	3.82	2.1	20.34	141.03	15.29	3.72	17.37	314.55
2424820.5	3.83	2.1	20.31	140.71	15.47	2.83	17.19	315.12
2424821.5	3.84	2.1	20.27	140.39	15.65	1.94	17.01	315.70
2424822.5	3.85	2.1	20.22	140.06	15.83	1.04	16.83	316.27
2424823.5	3.86	-2.1	20.17	139.74	-16.01	- 0.16	-16.65	316.84
2424824.5	3.87	2.1	20.10	139.42	16.18	+ 0.73	16.47	317.41
2424825.5	3.88	2.1	20.03	139.10	16.36	1.61	16.28	317.98
2424826.5	3.90	2.1	19.96	138.79	16.54	2.48	16.10	318.55
2424827.5	3.91	2.1	19.87	138.48	16.71	3.35	15.91	319.12
2424828.5	3.93	-2.0	19.78	138.17	-16.88	+ 4.22	-15.72	319.69
2424829.5	3.95	2.0	19.68	137.87	17.04	5.07	15.53	320.25
2424830.5	3.97	2.0	19.58	137.57	17.21	5.92	15.35	320.82
2424831.5	4.00	2.0	19.46	137.28	17.37	6.76	15.15	321.38
2424832.5	4.02	1.9	19.35	137.00	17.52	7.59	14.96	321.95
2424833.5	4.04	-1.9	19.23	136.73	-17.68	+ 8.41	-14.77	322.51
2424834.5	4.07	1.9	19.10	136.46	17.82	9.22	14.58	323.07
2424835.5	4.10	1.8	18.97	136.21	17.97	10.02	14.38	323.63
2424836.5	4.13	1.8	18.83	135.96	18.11	10.81	14.19	324.19
2424837.5	4.16	1.8	18.69	135.73	18.24	11.58	13.99	324.75
2424838.5	4.19	-1.8	18.55	135.50	-18.37	+12.35	-13.79	325.31
2424839.5	4.23	1.7	18.40	135.29	18.50	13.10	13.59	325.86
2424840.5	4.26	1.7	18.25	135.08	18.62	13.83	13.40	326.42
2424841.5	4.30	1.7	18.09	134.89	18.74	14.56	13.20	326.97
2424842.5	4.34	1.6	17.93	134.71	18.85	15.27	13.00	327.53
2424843.5	4.38	-1.6	17.77	134.55	-18.95	+15.96	-12.79	328.08
2424844.5	4.42	1.6	17.61	134.39	19.05	16.64	12.59	328.63
2424845.5	4.46	1.5	17.45	134.25	19.15	17.31	12.39	329.19
2424846.5	4.50	1.5	17.28	134.12	19.24	17.96	12.19	329.74
2424847.5	4.54	1.5	17.12	134.00	19.32	18.60	11.98	330.28
2424848.5	4.59	-1.4	16.95	133.90	-19.40	+19.22	-11.78	330.83
2424849.5	4.64	1.4	16.78	133.81	19.47	19.83	11.57	331.38
2424850.5	4.68	1.4	16.61	133.73	19.54	20.43	11.37	331.93
2424851.5	4.73	1.3	16.44	133.67	19.60	21.00	11.16	332.47
2424852.5	4.78	1.3	16.27	133.62	19.66	21.57	10.96	333.02
2424853.5	4.83	-1.3	16.10	133.58	-19.71	+22.11	-10.75	333.56

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
				°	°	°	°	h m	h m
2424793.5	0.950	25.81	0.94	257.27	322.00	99.09	99.18	17 50.5	17 50.1
2424794.5	0.953	25.12	0.90	257.31	321.98	90.06	90.15	18 27.5	18 27.1
2424795.5	0.955	24.41	0.85	257.34	321.97	81.05	81.14	19 04.4	19 04.0
2424796.5	0.958	23.69	0.81	257.38	321.96	72.05	72.14	19 41.3	19 40.9
2424797.5	0.960	22.96	0.77	257.41	321.94	63.06	63.15	20 18.1	20 17.7
2424798.5	0.963	22.21	0.72	257.44	321.93	54.09	54.18	20 54.9	20 54.5
2424799.5	0.965	21.45	0.68	257.47	321.91	45.13	45.22	21 31.6	21 31.2
2424800.5	0.968	20.68	0.63	257.50	321.89	36.18	36.27	22 08.2	22 07.9
2424801.5	0.970	19.89	0.59	257.54	321.87	27.25	27.34	22 44.8	22 44.5
2424802.5	0.972	19.09	0.54	257.57	321.85	18.32	18.41	23 21.4	23 21.0
2424803.5	0.975	18.28	0.50	257.60	321.83	9.41	9.50	23 57.9	23 57.5
2424804.5	0.977	17.46	0.46	257.64	321.82	0.51	0.60	.. .. .	.. .. .
2424805.5	0.979	16.63	0.42	257.69	321.80	351.62	351.71	0 34.4	0 34.0
2424806.5	0.981	15.78	0.38	257.74	321.78	342.74	342.83	1 10.8	1 10.4
2424807.5	0.983	14.93	0.34	257.80	321.76	333.87	333.97	1 47.1	1 46.8
2424808.5	0.985	14.06	0.30	257.87	321.74	325.01	325.11	2 23.5	2 23.1
2424809.5	0.987	13.19	0.27	257.95	321.72	316.16	316.26	2 59.8	2 59.4
2424810.5	0.989	12.31	0.23	258.06	321.70	307.32	307.41	3 36.0	3 35.6
2424811.5	0.990	11.42	0.20	258.19	321.68	298.49	298.58	4 12.2	4 11.8
2424812.5	0.992	10.53	0.17	258.35	321.67	289.66	289.76	4 48.4	4 48.0
2424813.5	0.993	9.62	0.14	258.55	321.65	280.85	280.94	5 24.6	5 24.2
2424814.5	0.994	8.72	0.12	258.80	321.63	272.03	272.12	6 00.7	6 00.3
2424815.5	0.995	7.80	0.09	259.14	321.62	263.23	263.32	6 36.8	6 36.4
2424816.5	0.996	6.89	0.07	259.58	321.61	254.42	254.52	7 12.9	7 12.5
2424817.5	0.997	5.97	0.06	260.19	321.59	245.63	245.72	7 49.0	7 48.6
2424818.5	0.998	5.05	0.04	261.05	321.58	236.83	236.92	8 25.0	8 24.6
2424819.5	0.999	4.13	0.03	262.32	321.58	228.04	228.13	9 01.0	9 00.7
2424820.5	0.999	3.21	0.02	264.38	321.57	219.25	219.34	9 37.1	9 36.7
2424821.5	1.000	2.30	0.01	268.12	321.56	210.46	210.55	10 13.1	10 12.7
2424822.5	1.000	1.42	0.00	276.74	321.56	201.67	201.77	10 49.2	10 48.8
2424823.5	1.000	0.66	0.00	308.42	321.55	192.88	192.98	11 25.2	11 24.8
2424824.5	1.000	0.75	0.00	29.43	321.55	184.09	184.19	12 01.2	12 00.9
2424825.5	1.000	1.55	0.00	54.20	321.55	175.30	175.39	12 37.3	12 36.9
2424826.5	1.000	2.42	0.01	61.59	321.55	166.50	166.60	13 13.4	13 13.0
2424827.5	0.999	3.32	0.02	64.96	321.56	157.70	157.80	13 49.5	13 49.1
2424828.5	0.999	4.21	0.03	66.85	321.56	148.90	148.99	14 25.6	14 25.2
2424829.5	0.998	5.10	0.04	68.04	321.56	140.09	140.18	15 01.7	15 01.4
2424830.5	0.997	5.98	0.05	68.85	321.57	131.27	131.36	15 37.9	15 37.5
2424831.5	0.996	6.86	0.07	69.42	321.58	122.44	122.54	16 14.1	16 13.7
2424832.5	0.995	7.73	0.09	69.84	321.58	113.61	113.70	16 50.4	16 50.0
2424833.5	0.994	8.58	0.11	70.16	321.59	104.77	104.86	17 26.6	17 26.3
2424834.5	0.993	9.43	0.13	70.40	321.60	95.92	96.01	18 03.0	18 02.6
2424835.5	0.992	10.27	0.15	70.59	321.61	87.06	87.15	18 39.3	18 38.9
2424836.5	0.991	11.10	0.18	70.74	321.62	78.19	78.29	19 15.7	19 15.4
2424837.5	0.989	11.91	0.20	70.86	321.63	69.31	69.41	19 52.2	19 51.8
2424838.5	0.988	12.71	0.23	70.95	321.64	60.42	60.52	20 28.7	20 28.3
2424839.5	0.986	13.50	0.25	71.03	321.65	51.52	51.61	21 05.2	21 04.9
2424840.5	0.985	14.28	0.28	71.08	321.66	42.61	42.70	21 41.8	21 41.5
2424841.5	0.983	15.04	0.31	71.13	321.67	33.68	33.77	22 18.5	22 18.1
2424842.5	0.981	15.79	0.34	71.17	321.67	24.74	24.84	22 55.2	22 54.8
2424843.5	0.979	16.53	0.37	71.19	321.68	15.79	15.89	23 32.0	23 31.6
2424844.5	0.978	17.25	0.40	71.21	321.69	6.83	6.92	.. .. .	.. .. .
2424845.5	0.976	17.96	0.43	71.23	321.70	357.85	357.95	0 08.8	0 08.4
2424846.5	0.974	18.66	0.45	71.24	321.70	348.87	348.96	0 45.7	0 45.3
2424847.5	0.972	19.34	0.48	71.25	321.71	339.86	339.95	1 22.6	1 22.2
2424848.5	0.970	20.00	0.51	71.26	321.71	330.85	330.94	1 59.6	1 59.2
2424849.5	0.968	20.65	0.54	71.26	321.71	321.82	321.91	2 36.7	2 36.3
2424850.5	0.966	21.29	0.57	71.26	321.71	312.77	312.87	3 13.8	3 13.4
2424851.5	0.964	21.91	0.59	71.26	321.72	303.72	303.81	3 50.9	3 50.6
2424852.5	0.962	22.52	0.62	71.26	321.71	294.65	294.74	4 28.2	4 27.8
2424853.5	0.960	23.11	0.65	71.27	321.71	285.56	285.66	5 05.5	5 05.1

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2425571.5	5.33	-1.0	14.60	193.49	+ 5.63	-22.62	− 4.18	349.97
2425572.5	5.29	1.0	14.69	193.39	5.53	22.05	3.97	350.48
2425573.5	5.26	1.0	14.79	193.28	5.42	21.47	3.76	351.00
2425574.5	5.23	1.0	14.88	193.15	5.30	20.87	3.55	351.51
2425575.5	5.20	1.1	14.96	193.01	5.18	20.27	3.33	352.02
2425576.5	5.17	-1.1	15.05	192.86	+ 5.06	-19.65	− 3.12	352.53
2425577.5	5.14	1.1	15.14	192.70	4.92	19.02	2.91	353.04
2425578.5	5.11	1.1	15.22	192.52	4.78	18.38	2.70	353.55
2425579.5	5.08	1.1	15.30	192.33	4.64	17.73	2.48	354.06
2425580.5	5.06	1.2	15.37	192.13	4.49	17.07	2.27	354.57
2425581.5	5.04	-1.2	15.44	191.92	+ 4.34	-16.39	− 2.06	355.08
2425582.5	5.01	1.2	15.51	191.70	4.18	15.71	1.85	355.58
2425583.5	4.99	1.2	15.58	191.46	4.01	15.02	1.64	356.09
2425584.5	4.97	1.2	15.64	191.22	3.84	14.31	1.43	356.59
2425585.5	4.96	1.3	15.70	190.96	3.67	13.60	1.22	357.10
2425586.5	4.94	-1.3	15.75	190.69	+ 3.49	-12.88	− 1.01	357.60
2425587.5	4.92	1.3	15.80	190.42	3.31	12.14	0.80	358.10
2425588.5	4.91	1.3	15.84	190.13	3.12	11.41	0.59	358.60
2425589.5	4.90	1.3	15.88	189.84	2.93	10.66	0.38	359.10
2425590.5	4.89	1.3	15.91	189.54	2.74	9.90	− 0.17	359.60
2425591.5	4.88	-1.4	15.94	189.23	+ 2.54	− 9.14	+ 0.04	0.10
2425592.5	4.87	1.4	15.96	188.92	2.35	8.38	0.25	0.60
2425593.5	4.87	1.4	15.98	188.60	2.15	7.61	0.46	1.10
2425594.5	4.86	1.4	15.99	188.27	1.95	6.83	0.67	1.59
2425595.5	4.86	1.4	16.00	187.94	1.74	6.05	0.87	2.09
2425596.5	4.86	-1.4	16.00	187.61	+ 1.54	− 5.27	+ 1.08	2.58
2425597.5	4.86	1.4	15.99	187.27	1.34	4.48	1.29	3.08
2425598.5	4.87	1.4	15.98	186.94	1.14	3.69	1.49	3.57
2425599.5	4.87	1.4	15.97	186.59	0.93	2.90	1.70	4.06
2425600.5	4.88	1.4	15.94	186.25	0.73	2.12	1.91	4.55
2425601.5	4.89	-1.4	15.92	185.91	+ 0.53	− 1.33	+ 2.11	5.04
2425602.5	4.90	1.4	15.88	185.57	0.34	− 0.54	2.32	5.53
2425603.5	4.91	1.4	15.84	185.23	+ 0.14	+ 0.24	2.52	6.02
2425604.5	4.92	1.4	15.80	184.89	− 0.05	1.03	2.72	6.51
2425605.5	4.94	1.4	15.75	184.56	0.24	1.80	2.93	7.00
2425606.5	4.96	-1.4	15.69	184.23	− 0.43	+ 2.58	+ 3.13	7.49
2425607.5	4.98	1.3	15.63	183.90	0.61	3.35	3.33	7.97
2425608.5	5.00	1.3	15.57	183.58	0.79	4.11	3.53	8.46
2425609.5	5.02	1.3	15.50	183.26	0.97	4.87	3.73	8.95
2425610.5	5.04	1.3	15.42	182.95	1.14	5.63	3.94	9.43
2425611.5	5.07	-1.3	15.34	182.64	− 1.30	+ 6.37	+ 4.14	9.91
2425612.5	5.10	1.2	15.26	182.35	1.46	7.11	4.34	10.40
2425613.5	5.13	1.2	15.17	182.05	1.62	7.85	4.53	10.88
2425614.5	5.16	1.2	15.08	181.77	1.77	8.57	4.73	11.36
2425615.5	5.19	1.1	14.99	181.50	1.91	9.28	4.93	11.84
2425616.5	5.22	-1.1	14.89	181.23	− 2.05	+ 9.99	+ 5.13	12.32
2425617.5	5.26	1.1	14.79	180.98	2.18	10.68	5.33	12.80
2425618.5	5.30	1.1	14.68	180.73	2.31	11.37	5.52	13.28
2425619.5	5.34	1.0	14.58	180.49	2.43	12.04	5.72	13.76
2425620.5	5.38	1.0	14.47	180.27	2.54	12.71	5.91	14.24
2425621.5	5.42	-1.0	14.35	180.05	− 2.65	+13.36	+ 6.11	14.72
2425622.5	5.46	1.0	14.24	179.85	2.75	14.00	6.30	15.19
2425623.5	5.51	0.9	14.12	179.65	2.84	14.64	6.50	15.67
2425624.5	5.55	0.9	14.01	179.47	2.93	15.25	6.69	16.14
2425625.5	5.60	0.9	13.89	179.30	3.00	15.86	6.88	16.62
2425626.5	5.65	-0.8	13.77	179.14	− 3.08	+16.46	+ 7.07	17.09
2425627.5	5.70	0.8	13.65	179.00	3.14	17.04	7.26	17.57
2425628.5	5.75	0.8	13.53	178.86	3.20	17.61	7.45	18.04
2425629.5	5.80	0.7	13.40	178.74	3.25	18.17	7.64	18.51
2425630.5	5.86	0.7	13.28	178.63	3.30	18.72	7.83	18.98
2425631.5	5.91	-0.7	13.16	178.53	− 3.34	+19.25	+ 8.02	19.45

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2425571.5	0.955	24.63	0.66	271.61	338.59	165.96	166.06	13 16.0	13 15.7
2425572.5	0.957	23.98	0.63	271.40	338.52	156.96	157.06	13 52.9	13 52.6
2425573.5	0.959	23.32	0.60	271.17	338.44	147.98	148.07	14 29.8	14 29.4
2425574.5	0.961	22.65	0.57	270.92	338.35	139.00	139.10	15 06.6	15 06.2
2425575.5	0.964	21.96	0.54	270.66	338.26	130.04	130.13	15 43.3	15 42.9
2425576.5	0.966	21.26	0.51	270.37	338.16	121.09	121.19	16 20.0	16 19.6
2425577.5	0.968	20.55	0.48	270.06	338.05	112.16	112.25	16 56.6	16 56.2
2425578.5	0.970	19.83	0.45	269.73	337.93	103.23	103.32	17 33.2	17 32.8
2425579.5	0.972	19.09	0.42	269.37	337.81	94.32	94.41	18 09.7	18 09.3
2425580.5	0.975	18.35	0.39	268.98	337.67	85.42	85.51	18 46.1	18 45.8
2425581.5	0.977	17.59	0.36	268.55	337.54	76.53	76.62	19 22.6	19 22.2
2425582.5	0.979	16.82	0.33	268.09	337.39	67.65	67.74	19 58.9	19 58.6
2425583.5	0.981	16.03	0.30	267.59	337.24	58.78	58.87	20 35.3	20 34.9
2425584.5	0.982	15.24	0.28	267.05	337.08	49.92	50.01	21 11.6	21 11.2
2425585.5	0.984	14.44	0.25	266.44	336.92	41.07	41.17	21 47.8	21 47.4
2425586.5	0.986	13.63	0.22	265.78	336.75	32.24	32.33	22 24.0	22 23.6
2425587.5	0.988	12.81	0.20	265.04	336.57	23.41	23.50	23 00.2	22 59.8
2425588.5	0.989	11.99	0.17	264.22	336.39	14.59	14.68	23 36.3	23 35.9
2425589.5	0.991	11.16	0.15	263.29	336.21	5.77	5.87	.. .. .	.. .. .
2425590.5	0.992	10.32	0.13	262.23	336.02	356.97	357.06	0 12.4	0 12.1
2425591.5	0.993	9.48	0.11	261.01	335.83	348.17	348.26	0 48.5	0 48.1
2425592.5	0.994	8.63	0.09	259.57	335.64	339.38	339.47	1 24.6	1 24.2
2425593.5	0.995	7.79	0.07	257.86	335.44	330.59	330.68	2 00.6	2 00.2
2425594.5	0.996	6.95	0.06	255.78	335.24	321.81	321.90	2 36.6	2 36.2
2425595.5	0.997	6.11	0.05	253.16	335.04	313.03	313.13	3 12.6	3 12.2
2425596.5	0.998	5.28	0.03	249.79	334.84	304.26	304.35	3 48.5	3 48.2
2425597.5	0.998	4.48	0.02	245.26	334.63	295.49	295.58	4 24.5	4 24.1
2425598.5	0.999	3.71	0.02	238.88	334.43	286.72	286.81	5 00.5	5 00.1
2425599.5	0.999	3.00	0.01	229.46	334.23	277.95	278.04	5 36.4	5 36.0
2425600.5	1.000	2.42	0.01	215.05	334.02	269.18	269.27	6 12.3	6 12.0
2425601.5	1.000	2.06	0.01	193.94	333.82	260.41	260.50	6 48.3	6 47.9
2425602.5	1.000	2.05	0.01	168.93	333.62	251.64	251.73	7 24.3	7 23.9
2425603.5	1.000	2.39	0.01	147.57	333.42	242.87	242.96	8 00.2	7 59.8
2425604.5	0.999	2.96	0.01	132.94	333.23	234.10	234.19	8 36.2	8 35.8
2425605.5	0.999	3.64	0.02	123.38	333.04	225.32	225.41	9 12.2	9 11.8
2425606.5	0.999	4.39	0.02	116.91	332.85	216.54	216.63	9 48.2	9 47.8
2425607.5	0.998	5.17	0.03	112.33	332.66	207.75	207.85	10 24.2	10 23.9
2425608.5	0.997	5.97	0.04	108.92	332.48	198.96	199.05	11 00.3	10 59.9
2425609.5	0.997	6.77	0.05	106.29	332.30	190.17	190.26	11 36.4	11 36.0
2425610.5	0.996	7.57	0.07	104.18	332.13	181.36	181.46	12 12.5	12 12.1
2425611.5	0.995	8.37	0.08	102.46	331.96	172.55	172.65	12 48.6	12 48.2
2425612.5	0.994	9.17	0.10	101.01	331.80	163.74	163.83	13 24.8	13 24.4
2425613.5	0.992	9.96	0.11	99.78	331.64	154.91	155.01	14 01.0	14 00.6
2425614.5	0.991	10.75	0.13	98.72	331.48	146.08	146.17	14 37.2	14 36.8
2425615.5	0.990	11.53	0.15	97.78	331.34	137.24	137.33	15 13.5	15 13.1
2425616.5	0.989	12.29	0.17	96.95	331.19	128.39	128.48	15 49.8	15 49.5
2425617.5	0.987	13.05	0.19	96.21	331.06	119.53	119.62	16 26.2	16 25.8
2425618.5	0.986	13.79	0.21	95.54	330.93	110.66	110.75	17 02.6	17 02.2
2425619.5	0.984	14.53	0.23	94.93	330.81	101.77	101.87	17 39.1	17 38.7
2425620.5	0.982	15.25	0.25	94.38	330.69	92.88	92.98	18 15.6	18 15.2
2425621.5	0.981	15.96	0.28	93.87	330.58	83.98	84.07	18 52.1	18 51.7
2425622.5	0.979	16.65	0.30	93.41	330.47	75.07	75.16	19 28.7	19 28.3
2425623.5	0.977	17.34	0.32	92.98	330.37	66.14	66.23	20 05.4	20 05.0
2425624.5	0.976	18.01	0.34	92.58	330.28	57.20	57.30	20 42.1	20 41.7
2425625.5	0.974	18.66	0.37	92.21	330.20	48.25	48.35	21 18.8	21 18.4
2425626.5	0.972	19.31	0.39	91.87	330.12	39.29	39.38	21 55.6	21 55.2
2425627.5	0.970	19.94	0.41	91.55	330.05	30.32	30.41	22 32.5	22 32.1
2425628.5	0.968	20.55	0.43	91.26	329.98	21.33	21.42	23 09.4	23 09.0
2425629.5	0.966	21.15	0.45	90.98	329.92	12.33	12.43	23 46.4	23 46.0
2425630.5	0.964	21.74	0.47	90.73	329.87	3.32	3.42	.. .. .	.. .. .
2425631.5	0.963	22.31	0.49	90.49	329.82	354.30	354.39	0 23.4	0 23.0

Julian Day	Light-time	Stellar Magnitude	Diameter.	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2426338.5	6.20	-0.5	12.54	229.82	+17.58	-23.33	+11.63	28.77
2426339.5	6.16	0.6	12.63	229.70	17.50	22.77	11.80	29.23
2426340.5	6.11	0.6	12.72	229.56	17.42	22.20	11.97	29.68
2426341.5	6.07	0.6	12.81	229.41	17.33	21.61	12.14	30.14
2426342.5	6.03	0.6	12.89	229.25	17.25	21.01	12.31	30.60
2426343.5	5.99	-0.7	12.98	229.07	+17.16	-20.39	+12.48	31.06
2426344.5	5.95	0.7	13.06	228.88	17.06	19.77	12.65	31.52
2426345.5	5.92	0.7	13.15	228.67	16.96	19.13	12.81	31.97
2426346.5	5.88	0.7	13.23	228.45	16.86	18.47	12.98	32.43
2426347.5	5.85	0.7	13.30	228.22	16.76	17.81	13.15	32.88
2426348.5	5.81	-0.8	13.38	227.98	+16.65	-17.13	+13.31	33.34
2426349.5	5.78	0.8	13.45	227.72	16.54	16.44	13.47	33.79
2426350.5	5.75	0.8	13.52	227.46	16.43	15.73	13.63	34.25
2426351.5	5.72	0.8	13.59	227.18	16.31	15.02	13.80	34.70
2426352.5	5.70	0.8	13.65	226.89	16.19	14.29	13.96	35.16
2426353.5	5.67	-0.9	13.71	226.59	+16.07	-13.55	+14.12	35.61
2426354.5	5.65	0.9	13.77	226.28	15.95	12.81	14.27	36.06
2426355.5	5.63	0.9	13.82	225.96	15.82	12.05	14.43	36.51
2426356.5	5.61	0.9	13.87	225.63	15.69	11.28	14.59	36.97
2426357.5	5.59	0.9	13.92	225.29	15.56	10.50	14.74	37.42
2426358.5	5.57	-1.0	13.96	224.94	+15.43	- 9.72	+14.90	37.87
2426359.5	5.56	1.0	14.00	224.59	15.30	8.93	15.05	38.32
2426360.5	5.54	1.0	14.03	224.23	15.17	8.13	15.21	38.77
2426361.5	5.53	1.0	14.06	223.86	15.03	7.32	15.36	39.22
2426362.5	5.52	1.0	14.08	223.49	14.89	6.51	15.51	39.67
2426363.5	5.51	-1.0	14.10	223.11	+14.76	- 5.69	+15.66	40.12
2426364.5	5.51	1.0	14.12	222.73	14.62	4.87	15.81	40.57
2426365.5	5.50	1.1	14.13	222.35	14.48	4.05	15.96	41.01
2426366.5	5.50	1.1	14.13	221.97	14.34	3.22	16.10	41.46
2426367.5	5.50	1.1	14.14	221.58	14.21	2.40	16.25	41.91
2426368.5	5.50	-1.1	14.13	221.19	+14.07	- 1.57	+16.39	42.36
2426369.5	5.51	1.1	14.12	220.80	13.94	-0.74	16.54	42.81
2426370.5	5.51	1.1	14.11	220.42	13.80	+ 0.09	16.68	43.25
2426371.5	5.52	1.1	14.09	220.03	13.67	0.92	16.82	43.70
2426372.5	5.53	1.0	14.07	219.65	13.54	1.74	16.96	44.14
2426373.5	5.54	-1.0	14.04	219.27	+13.41	+ 2.57	+17.10	44.59
2426374.5	5.55	1.0	14.00	218.89	13.28	3.39	17.24	45.04
2426375.5	5.57	1.0	13.97	218.52	13.16	4.20	17.38	45.48
2426376.5	5.59	1.0	13.93	218.15	13.04	5.01	17.51	45.93
2426377.5	5.60	1.0	13.88	217.79	12.92	5.82	17.65	46.37
2426378.5	5.62	-0.9	13.83	217.43	+12.81	+ 6.62	+17.78	46.81
2426379.5	5.65	0.9	13.78	217.08	12.69	7.41	17.92	47.26
2426380.5	5.67	0.9	13.72	216.74	12.59	8.20	18.05	47.70
2426381.5	5.70	0.9	13.66	216.41	12.48	8.98	18.18	48.15
2426382.5	5.72	0.9	13.59	216.08	12.38	9.75	18.31	48.59
2426383.5	5.75	-0.8	13.52	215.76	+12.28	+10.52	+18.44	49.03
2426384.5	5.78	0.8	13.45	215.46	12.19	11.27	18.57	49.48
2426385.5	5.81	0.8	13.38	215.16	12.10	12.02	18.69	49.92
2426386.5	5.85	0.8	13.30	214.87	12.02	12.75	18.82	50.36
2426387.5	5.88	0.7	13.22	214.59	11.94	13.48	18.94	50.80
2426388.5	5.92	-0.7	13.14	214.32	+11.87	+14.20	+19.06	51.24
2426389.5	5.96	0.7	13.05	214.07	11.80	14.90	19.19	51.68
2426390.5	6.00	0.7	12.96	213.82	11.73	15.60	19.31	52.13
2426391.5	6.04	0.6	12.88	213.59	11.67	16.28	19.43	52.57
2426392.5	6.08	0.6	12.78	213.37	11.62	16.95	19.55	53.01
2426393.5	6.13	-0.6	12.69	213.16	+11.57	+17.61	+19.66	53.45
2426394.5	6.17	0.6	12.60	212.96	11.53	18.26	19.78	53.89
2426395.5	6.22	0.5	12.50	212.78	11.49	18.89	19.89	54.33
2426396.5	6.27	0.5	12.41	212.61	11.46	19.52	20.01	54.77
2426397.5	6.32	0.5	12.31	212.45	11.43	20.13	20.12	55.21
2426398.5	6.37	-0.5	12.21	212.30	+11.41	+20.73	+20.23	55.65

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2426338.5	0.959	23.32	0.51	283.54	1.96	343.55	343.65	1 07.5	1 07.1
2426339.5	0.961	22.73	0.49	283.28	1.88	334.58	334.68	1 44.3	1 43.9
2426340.5	0.963	22.13	0.47	283.01	1.79	325.62	325.72	2 21.0	2 20.6
2426341.5	0.965	21.52	0.45	282.71	1.70	316.67	316.77	2 57.7	2 57.3
2426342.5	0.967	20.89	0.42	282.39	1.59	307.74	307.84	3 34.3	3 34.0
2426343.5	0.969	20.25	0.40	282.05	1.48	298.82	298.92	4 10.9	4 10.5
2426344.5	0.971	19.60	0.38	281.68	1.36	289.91	290.01	4 47.4	4 47.1
2426345.5	0.973	18.93	0.36	281.28	1.23	281.02	281.12	5 23.9	5 23.5
2426346.5	0.975	18.26	0.33	280.86	1.09	272.14	272.23	6 00.3	5 59.9
2426347.5	0.977	17.57	0.31	280.40	0.94	263.27	263.36	6 36.7	6 36.3
2426348.5	0.978	16.87	0.29	279.89	0.79	254.41	254.51	7 13.0	7 12.6
2426349.5	0.980	16.16	0.27	279.35	0.62	245.57	245.66	7 49.2	7 48.9
2426350.5	0.982	15.44	0.24	278.75	0.45	236.73	236.83	8 25.5	8 25.1
2426351.5	0.984	14.71	0.22	278.10	0.27	227.91	228.00	9 01.6	9 01.2
2426352.5	0.985	13.98	0.20	277.38	0.09	219.10	219.19	9 37.7	9 37.3
2426353.5	0.987	13.23	0.18	276.59	359.89	210.30	210.39	10 13.8	10 13.4
2426354.5	0.988	12.47	0.16	275.70	359.69	201.51	201.60	10 49.8	10 49.4
2426355.5	0.990	11.71	0.14	274.70	359.48	192.72	192.82	11 25.8	11 25.4
2426356.5	0.991	10.94	0.13	273.58	359.27	183.95	184.04	12 01.8	12 01.4
2426357.5	0.992	10.17	0.11	272.29	359.05	175.18	175.28	12 37.7	12 37.3
2426358.5	0.993	9.39	0.09	270.81	358.82	166.43	166.52	13 13.6	13 13.2
2426359.5	0.994	8.62	0.08	269.07	358.59	157.68	157.77	13 49.4	13 49.1
2426360.5	0.995	7.84	0.07	267.00	358.36	148.93	149.03	14 25.3	14 24.9
2426361.5	0.996	7.07	0.05	264.51	358.12	140.19	140.29	15 01.1	15 00.7
2426362.5	0.997	6.31	0.04	261.44	357.88	131.46	131.55	15 36.9	15 36.5
2426363.5	0.998	5.57	0.03	257.58	357.63	122.73	122.82	16 12.7	16 12.3
2426364.5	0.998	4.85	0.03	252.58	357.38	114.00	114.10	16 48.4	16 48.0
2426365.5	0.999	4.18	0.02	245.96	357.13	105.28	105.37	17 24.2	17 23.8
2426366.5	0.999	3.57	0.01	237.01	356.87	96.56	96.65	17 59.9	17 59.5
2426367.5	0.999	3.08	0.01	224.90	356.62	87.84	87.93	18 35.7	18 35.3
2426368.5	0.999	2.77	0.01	209.25	356.36	79.12	79.21	19 11.4	19 11.0
2426369.5	0.999	2.69	0.01	191.34	356.11	70.39	70.49	19 47.2	19 46.8
2426370.5	0.999	2.88	0.01	174.12	355.85	61.67	61.77	20 22.9	20 22.6
2426371.5	0.999	3.27	0.01	160.01	355.60	52.95	53.04	20 58.7	20 58.3
2426372.5	0.999	3.81	0.02	149.38	355.34	44.22	44.32	21 34.5	21 34.1
2426373.5	0.998	4.44	0.02	141.55	355.09	35.49	35.58	22 10.3	22 09.9
2426374.5	0.998	5.13	0.03	135.71	354.84	26.76	26.85	22 46.1	22 45.8
2426375.5	0.997	5.85	0.04	131.25	354.60	18.02	18.11	23 22.0	23 21.6
2426376.5	0.997	6.59	0.05	127.75	354.35	9.27	9.37	23 57.9	23 57.5
2426377.5	0.996	7.34	0.06	124.94	354.11	0.52	0.62	.. ..	.. ..
2426378.5	0.995	8.09	0.07	122.64	353.88	351.76	351.86	0 33.8	0 33.4
2426379.5	0.994	8.85	0.08	120.71	353.64	343.00	343.09	1 09.7	1 09.3
2426380.5	0.993	9.61	0.10	119.07	353.42	334.23	334.32	1 45.7	1 45.3
2426381.5	0.992	10.36	0.11	117.66	353.19	325.45	325.54	2 21.7	2 21.3
2426382.5	0.991	11.11	0.13	116.42	352.98	316.66	316.75	2 57.7	2 57.3
2426383.5	0.989	11.86	0.14	115.33	352.77	307.86	307.96	3 33.8	3 33.4
2426384.5	0.988	12.59	0.16	114.36	352.56	299.05	299.15	4 09.9	4 09.5
2426385.5	0.987	13.32	0.18	113.49	352.37	290.24	290.33	4 46.1	4 45.7
2426386.5	0.985	14.04	0.20	112.70	352.18	281.41	281.50	5 22.3	5 21.9
2426387.5	0.984	14.75	0.22	111.98	351.99	272.57	272.66	5 58.5	5 58.1
2426388.5	0.982	15.45	0.24	111.33	351.82	263.72	263.81	6 34.8	6 34.5
2426389.5	0.980	16.14	0.26	110.73	351.65	254.86	254.95	7 11.2	7 10.8
2426390.5	0.979	16.81	0.28	110.18	351.48	245.98	246.08	7 47.6	7 47.2
2426391.5	0.977	17.48	0.30	109.66	351.33	237.10	237.19	8 24.1	8 23.7
2426392.5	0.975	18.13	0.32	109.19	351.19	228.20	228.30	9 00.6	9 00.2
2426393.5	0.973	18.77	0.34	108.75	351.05	219.29	219.39	9 37.1	9 36.8
2426394.5	0.972	19.40	0.36	108.34	350.92	210.37	210.46	10 13.8	10 13.4
2426395.5	0.970	20.01	0.38	107.96	350.80	201.43	201.53	10 50.4	10 50.0
2426396.5	0.968	20.61	0.40	107.60	350.69	192.49	192.58	11 27.2	11 26.8
2426397.5	0.966	21.20	0.42	107.27	350.58	183.53	183.62	12 03.9	12 03.6
2426398.5	0.964	21.78	0.44	106.96	350.49	174.55	174.65	12 40.8	12 40.4

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2427102.5	6.53	-0.4	11.91	265.13	+22.39	-24.30	+21.94	63.12
2427103.5	6.48	0.4	12.00	265.00	22.37	23.71	22.03	63.55
2427104.5	6.43	0.4	12.10	264.85	22.34	23.10	22.11	63.99
2427105.5	6.38	0.5	12.19	264.69	22.31	22.48	22.20	64.43
2427106.5	6.33	0.5	12.29	264.51	22.28	21.84	22.28	64.86
2427107.5	6.28	-0.5	12.38	264.33	+22.25	-21.19	+22.37	65.30
2427108.5	6.24	0.5	12.47	264.12	22.22	20.52	22.45	65.74
2427109.5	6.19	0.6	12.56	263.91	22.19	19.84	22.53	66.17
2427110.5	6.15	0.6	12.65	263.68	22.16	19.14	22.61	66.61
2427111.5	6.11	0.6	12.73	263.43	22.13	18.43	22.69	67.05
2427112.5	6.07	-0.6	12.82	263.18	+22.11	-17.71	+22.76	67.48
2427113.5	6.03	0.7	12.90	262.91	22.08	16.98	22.84	67.92
2427114.5	5.99	0.7	12.98	262.62	22.05	16.23	22.91	68.36
2427115.5	5.96	0.7	13.06	262.33	22.02	15.47	22.99	68.79
2427116.5	5.92	0.7	13.13	262.02	21.99	14.69	23.06	69.23
2427117.5	5.89	-0.7	13.20	261.71	+21.97	-13.91	+23.13	69.67
2427118.5	5.86	0.8	13.27	261.38	21.94	13.11	23.20	70.10
2427119.5	5.83	0.8	13.34	261.04	21.91	12.30	23.26	70.54
2427120.5	5.80	0.8	13.40	260.69	21.88	11.48	23.33	70.98
2427121.5	5.78	0.8	13.46	260.33	21.85	10.65	23.39	71.41
2427122.5	5.75	-0.9	13.52	259.96	+21.83	- 9.81	+23.46	71.85
2427123.5	5.73	0.9	13.57	259.58	21.80	8.96	23.52	72.29
2427124.5	5.71	0.9	13.62	259.19	21.77	8.10	23.58	72.72
2427125.5	5.69	0.9	13.67	258.80	21.74	7.24	23.64	73.16
2427126.5	5.67	0.9	13.71	258.40	21.72	6.36	23.69	73.60
2427127.5	5.66	-0.9	13.74	258.00	+21.69	- 5.49	+23.75	74.03
2427128.5	5.65	1.0	13.78	257.59	21.66	4.60	23.80	74.47
2427129.5	5.63	1.0	13.80	257.17	21.63	3.71	23.85	74.91
2427130.5	5.63	1.0	13.83	256.75	21.61	2.82	23.91	75.34
2427131.5	5.62	1.0	13.85	256.33	21.58	1.92	23.96	75.78
2427132.5	5.61	-1.0	13.86	255.91	+21.55	- 1.02	+24.00	76.22
2427133.5	5.61	1.0	13.87	255.48	21.53	- 0.13	24.05	76.65
2427134.5	5.61	1.0	13.87	255.06	21.50	+ 0.78	24.10	77.09
2427135.5	5.61	1.0	13.87	254.63	21.48	1.68	24.14	77.53
2427136.5	5.61	1.0	13.87	254.21	21.45	2.58	24.18	77.96
2427137.5	5.61	-1.0	13.86	253.79	+21.43	+ 3.47	+24.22	78.40
2427138.5	5.62	1.0	13.85	253.37	21.40	4.37	24.26	78.84
2427139.5	5.62	1.0	13.83	252.96	21.38	5.26	24.30	79.28
2427140.5	5.63	0.9	13.81	252.55	21.36	6.15	24.34	79.71
2427141.5	5.64	0.9	13.78	252.15	21.34	7.03	24.37	80.15
2427142.5	5.66	-0.9	13.75	251.75	+21.32	+ 7.91	+24.41	80.59
2427143.5	5.67	0.9	13.71	251.36	21.30	8.78	24.44	81.03
2427144.5	5.69	0.9	13.67	250.97	21.28	9.64	24.47	81.47
2427145.5	5.71	0.9	13.63	250.60	21.27	10.50	24.50	81.90
2427146.5	5.73	0.8	13.58	250.23	21.25	11.35	24.53	82.34
2427147.5	5.75	-0.8	13.53	249.87	+21.24	+12.19	+24.55	82.78
2427148.5	5.77	0.8	13.48	249.52	21.23	13.02	24.58	83.22
2427149.5	5.79	0.8	13.42	249.18	21.22	13.84	24.60	83.66
2427150.5	5.82	0.8	13.36	248.85	21.21	14.66	24.62	84.10
2427151.5	5.85	0.7	13.30	248.53	21.20	15.46	24.64	84.54
2427152.5	5.88	-0.7	13.23	248.22	+21.19	+16.25	+24.66	84.97
2427153.5	5.91	0.7	13.16	247.92	21.19	17.03	24.68	85.41
2427154.5	5.94	0.7	13.09	247.64	21.19	17.80	24.69	85.85
2427155.5	5.97	0.7	13.02	247.36	21.19	18.55	24.71	86.29
2427156.5	6.01	0.6	12.94	247.10	21.19	19.30	24.72	86.73
2427157.5	6.05	-0.6	12.86	246.86	+21.19	+20.03	+24.73	87.17
2427158.5	6.08	0.6	12.78	246.62	21.20	20.75	24.74	87.61
2427159.5	6.12	0.6	12.70	246.40	21.21	21.45	24.75	88.05
2427160.5	6.16	0.5	12.62	246.20	21.22	22.15	24.75	88.49
2427161.5	6.21	0.5	12.53	246.00	21.23	22.82	24.76	88.94
2427162.5	6.25	-0.5	12.45	245.83	+21.24	+23.49	+24.76	89.38

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2427102.5	0.962	22.49	0.45	288.68	22.18	189.63	189.72	11 38.9	11 38.5
2427103.5	0.964	21.93	0.43	288.45	22.11	180.66	180.76	12 15.6	12 15.2
2427104.5	0.966	21.36	0.42	288.21	22.04	171.71	171.81	12 52.3	12 51.9
2427105.5	0.967	20.78	0.40	287.95	21.96	162.78	162.88	13 28.9	13 28.5
2427106.5	0.969	20.19	0.38	287.68	21.88	153.86	153.95	14 05.5	14 05.1
2427107.5	0.971	19.58	0.36	287.38	21.79	144.95	145.05	14 42.0	14 41.6
2427108.5	0.973	18.97	0.34	287.06	21.69	136.06	136.15	15 18.4	15 18.0
2427109.5	0.975	18.34	0.32	286.72	21.58	127.18	127.27	15 54.8	15 54.4
2427110.5	0.976	17.69	0.30	286.36	21.46	118.31	118.40	16 31.1	16 30.8
2427111.5	0.978	17.04	0.28	285.96	21.34	109.45	109.55	17 07.4	17 07.0
2427112.5	0.980	16.37	0.26	285.53	21.22	100.61	100.71	17 43.6	17 43.2
2427113.5	0.981	15.70	0.24	285.06	21.08	91.78	91.88	18 19.8	18 19.4
2427114.5	0.983	15.01	0.22	284.54	20.94	82.97	83.06	18 55.9	18 55.5
2427115.5	0.984	14.31	0.20	283.98	20.79	74.16	74.26	19 32.0	19 31.6
2427116.5	0.986	13.61	0.18	283.35	20.63	65.37	65.46	20 08.0	20 07.6
2427117.5	0.987	12.89	0.17	282.65	20.47	56.59	56.68	20 44.0	20 43.6
2427118.5	0.989	12.16	0.15	281.87	20.31	47.81	47.91	21 19.9	21 19.5
2427119.5	0.990	11.43	0.13	280.99	20.13	39.05	39.15	21 55.8	21 55.4
2427120.5	0.991	10.69	0.12	279.99	19.95	30.30	30.40	22 31.6	22 31.2
2427121.5	0.992	9.94	0.10	278.84	19.77	21.56	21.66	23 07.4	23 07.0
2427122.5	0.994	9.19	0.09	277.51	19.57	12.83	12.92	23 43.2	23 42.8
2427123.5	0.995	8.44	0.07	275.94	19.38	4.10	4.20	.. .. .	.. .. .
2427124.5	0.996	7.69	0.06	274.06	19.18	355.38	355.48	0 18.9	0 18.5
2427125.5	0.996	6.94	0.05	271.77	18.97	346.67	346.77	0 54.6	0 54.2
2427126.5	0.997	6.19	0.04	268.94	18.76	337.97	338.07	1 30.3	1 29.9
2427127.5	0.998	5.46	0.03	265.35	18.54	329.27	329.37	2 06.0	2 05.6
2427128.5	0.998	4.75	0.02	260.67	18.33	320.58	320.67	2 41.6	2 41.2
2427129.5	0.999	4.08	0.02	254.42	18.10	311.89	311.98	3 17.2	3 16.8
2427130.5	0.999	3.47	0.01	245.85	17.88	303.20	303.30	3 52.8	3 52.4
2427131.5	0.999	2.96	0.01	234.01	17.65	294.52	294.61	4 28.4	4 28.0
2427132.5	0.999	2.63	0.01	218.30	17.42	285.83	285.93	5 04.0	5 03.6
2427133.5	1.000	2.53	0.01	199.77	17.19	277.15	277.25	5 39.6	5 39.2
2427134.5	0.999	2.69	0.01	181.69	16.96	268.47	268.56	6 15.2	6 14.8
2427135.5	0.999	3.08	0.01	166.93	16.73	259.78	259.88	6 50.8	6 50.4
2427136.5	0.999	3.62	0.01	155.98	16.50	251.10	251.19	7 26.4	7 26.0
2427137.5	0.999	4.25	0.02	148.06	16.27	242.41	242.50	8 02.0	8 01.6
2427138.5	0.998	4.94	0.03	142.25	16.04	233.72	233.81	8 37.6	8 37.2
2427139.5	0.998	5.66	0.03	137.87	15.81	225.02	225.12	9 13.3	9 12.9
2427140.5	0.997	6.40	0.04	134.48	15.58	216.32	216.41	9 49.0	9 48.6
2427141.5	0.996	7.15	0.05	131.78	15.35	207.61	207.71	10 24.7	10 24.3
2427142.5	0.995	7.91	0.07	129.59	15.13	198.90	198.99	11 00.4	11 00.0
2427143.5	0.994	8.67	0.08	127.78	14.91	190.18	190.28	11 36.2	11 35.8
2427144.5	0.993	9.44	0.09	126.25	14.69	181.45	181.55	12 12.0	12 11.6
2427145.5	0.992	10.20	0.11	124.95	14.48	172.72	172.81	12 47.8	12 47.4
2427146.5	0.991	10.95	0.12	123.82	14.27	163.97	164.07	13 23.7	13 23.3
2427147.5	0.990	11.71	0.14	122.83	14.06	155.22	155.31	13 59.6	13 59.2
2427148.5	0.988	12.45	0.16	121.95	13.86	146.45	146.55	14 35.5	14 35.1
2427149.5	0.987	13.19	0.18	121.17	13.67	137.68	137.78	15 11.5	15 11.1
2427150.5	0.985	13.92	0.20	120.47	13.48	128.90	128.99	15 47.6	15 47.2
2427151.5	0.984	14.64	0.22	119.84	13.29	120.10	120.20	16 23.7	16 23.3
2427152.5	0.982	15.35	0.24	119.26	13.11	111.30	111.39	16 59.8	16 59.4
2427153.5	0.980	16.06	0.26	118.73	12.94	102.48	102.57	17 36.0	17 35.6
2427154.5	0.979	16.75	0.28	118.25	12.78	93.65	93.74	18 12.3	18 11.9
2427155.5	0.977	17.43	0.30	117.81	12.62	84.80	84.90	18 48.6	18 48.2
2427156.5	0.975	18.10	0.32	117.40	12.47	75.94	76.04	19 24.9	19 24.5
2427157.5	0.973	18.76	0.34	117.01	12.32	67.07	67.17	20 01.3	20 01.0
2427158.5	0.972	19.41	0.36	116.66	12.18	58.19	58.29	20 37.8	20 37.4
2427159.5	0.970	20.05	0.38	116.33	12.05	49.29	49.39	21 14.4	21 14.0
2427160.5	0.968	20.67	0.41	116.02	11.93	40.38	40.48	21 51.0	21 50.6
2427161.5	0.966	21.28	0.43	115.74	11.82	31.46	31.55	22 27.6	22 27.2
2427162.5	0.964	21.88	0.45	115.47	11.71	22.52	22.61	23 04.4	23 04.0

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2427868.5	6.25	-0.5	12.44	301.86	+19.15	-23.26	+24.52	97.82
2427869.5	6.19	0.5	12.56	301.76	19.17	22.66	24.49	98.27
2427870.5	6.14	0.6	12.67	301.64	19.20	22.06	24.46	98.72
2427871.5	6.09	0.6	12.78	301.51	19.23	21.43	24.43	99.16
2427872.5	6.04	0.6	12.89	301.36	19.26	20.80	24.39	99.61
2427873.5	5.98	-0.6	13.00	301.20	+19.30	-20.15	+24.36	100.06
2427874.5	5.93	0.7	13.11	301.03	19.34	19.49	24.32	100.51
2427875.5	5.89	0.7	13.21	300.85	19.38	18.82	24.28	100.95
2427876.5	5.84	0.7	13.32	300.65	19.43	18.13	24.24	101.40
2427877.5	5.79	0.8	13.42	300.44	19.49	17.43	24.20	101.85
2427878.5	5.75	-0.8	13.53	300.22	+19.54	-16.72	+24.16	102.30
2427879.5	5.71	0.8	13.63	299.99	19.60	15.99	24.11	102.75
2427880.5	5.67	0.8	13.73	299.74	19.66	15.26	24.07	103.20
2427881.5	5.63	0.9	13.83	299.48	19.73	14.51	24.02	103.65
2427882.5	5.59	0.9	13.92	299.22	19.80	13.75	23.97	104.11
2427883.5	5.55	-0.9	14.01	298.93	+19.87	-12.97	+23.92	104.56
2427884.5	5.52	0.9	14.10	298.64	19.94	12.19	23.86	105.01
2427885.5	5.48	1.0	14.19	298.34	20.02	11.40	23.81	105.46
2427886.5	5.45	1.0	14.27	298.03	20.10	10.59	23.75	105.92
2427887.5	5.42	1.0	14.35	297.70	20.19	9.78	23.70	106.37
2427888.5	5.39	-1.0	14.43	297.37	+20.27	- 8.96	+23.64	106.82
2427889.5	5.36	1.1	14.50	297.03	20.36	8.12	23.58	107.28
2427890.5	5.34	1.1	14.57	296.68	20.45	7.28	23.51	107.73
2427891.5	5.31	1.1	14.64	296.32	20.54	6.43	23.45	108.19
2427892.5	5.29	1.1	14.70	295.96	20.64	5.57	23.38	108.64
2427893.5	5.27	-1.2	14.76	295.58	+20.74	- 4.71	+23.32	109.10
2427894.5	5.25	1.2	14.81	295.21	20.83	3.84	23.25	109.56
2427895.5	5.23	1.2	14.86	294.82	20.93	2.97	23.18	110.01
2427896.5	5.22	1.2	14.90	294.43	21.03	2.09	23.11	110.47
2427897.5	5.21	1.2	14.94	294.04	21.13	1.20	23.03	110.93
2427898.5	5.19	-1.2	14.97	293.64	+21.24	- 0.32	+22.96	111.39
2427899.5	5.18	1.2	15.00	293.25	21.34	+ 0.57	22.88	111.84
2427900.5	5.18	1.2	15.03	292.85	21.44	1.46	22.80	112.30
2427901.5	5.17	1.2	15.05	292.45	21.54	2.36	22.72	112.76
2427902.5	5.17	1.2	15.06	292.05	21.65	3.25	22.64	113.22
2427903.5	5.16	-1.2	15.07	291.65	+21.75	+ 4.14	+22.56	113.68
2427904.5	5.16	1.2	15.07	291.25	21.85	5.02	22.47	114.15
2427905.5	5.16	1.2	15.07	290.86	21.95	5.91	22.38	114.61
2427906.5	5.16	1.2	15.06	290.46	22.05	6.79	22.30	115.07
2427907.5	5.17	1.2	15.05	290.08	22.15	7.67	22.21	115.53
2427908.5	5.17	-1.2	15.04	289.69	+22.25	+ 8.54	+22.12	116.00
2427909.5	5.18	1.2	15.02	289.31	22.35	9.41	22.02	116.46
2427910.5	5.19	1.1	14.99	288.94	22.45	10.28	21.93	116.92
2427911.5	5.20	1.1	14.96	288.58	22.54	11.13	21.83	117.39
2427912.5	5.21	1.1	14.93	288.22	22.63	11.98	21.74	117.85
2427913.5	5.22	-1.1	14.89	287.87	+22.73	+12.82	+21.64	118.32
2427914.5	5.24	1.1	14.84	287.53	22.82	13.65	21.54	118.79
2427915.5	5.26	1.1	14.80	287.20	22.91	14.47	21.44	119.25
2427916.5	5.27	1.0	14.75	286.88	23.00	15.28	21.33	119.72
2427917.5	5.29	1.0	14.69	286.56	23.08	16.08	21.23	120.19
2427918.5	5.32	-1.0	14.63	286.26	+23.16	+16.88	+21.12	120.66
2427919.5	5.34	1.0	14.57	285.97	23.25	17.66	21.01	121.13
2427920.5	5.36	1.0	14.51	285.69	23.33	18.42	20.90	121.60
2427921.5	5.39	0.9	14.44	285.43	23.41	19.18	20.79	122.07
2427922.5	5.41	0.9	14.37	285.17	23.48	19.92	20.68	122.54
2427923.5	5.44	- 0.9	14.30	284.93	+23.56	+20.65	+20.56	123.01
2427924.5	5.47	0.9	14.22	284.70	23.63	21.37	20.45	123.49
2427925.5	5.50	0.9	14.14	284.49	23.70	22.07	20.33	123.96
2427926.5	5.53	0.8	14.06	284.29	23.77	22.76	20.21	124.43
2427927.5	5.56	0.8	13.98	284.10	23.83	23.44	20.09	124.91
2427928.5	5.60	-0.8	13.90	283.93	+23.90	+24.10	+19.97	125.38

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2427868.5	0.963	22.21	0.46	287.74	35.89	16.20	16.30	23 30.4	23 30.0
2427869.5	0.965	21.67	0.44	287.60	35.86	7.22	7.31	.. .. .	.. .. .
2427870.5	0.966	21.11	0.42	287.46	35.84	358.24	358.34	0 07.2	0 06.8
2427871.5	0.968	20.54	0.41	287.31	35.81	349.28	349.37	0 44.0	0 43.6
2427872.5	0.970	19.95	0.39	287.15	35.77	340.33	340.42	1 20.7	1 20.3
2427873.5	0.972	19.35	0.37	286.98	35.74	331.39	331.48	1 57.4	1 57.0
2427874.5	0.973	18.74	0.35	286.80	35.70	322.46	322.56	2 34.0	2 33.6
2427875.5	0.975	18.12	0.33	286.60	35.66	313.55	313.65	3 10.5	3 10.1
2427876.5	0.977	17.48	0.31	286.39	35.61	304.65	304.75	3 47.0	3 46.6
2427877.5	0.979	16.83	0.29	286.17	35.56	295.76	295.86	4 23.4	4 23.1
2427878.5	0.980	16.17	0.27	285.92	35.51	286.89	286.98	4 59.8	4 59.4
2427879.5	0.982	15.50	0.25	285.65	35.45	278.02	278.12	5 36.2	5 35.8
2427880.5	0.983	14.81	0.23	285.36	35.39	269.17	269.27	6 12.5	6 12.1
2427881.5	0.985	14.12	0.21	285.03	35.33	260.33	260.43	6 48.7	6 48.3
2427882.5	0.986	13.41	0.19	284.66	35.27	251.50	251.60	7 24.9	7 24.5
2427883.5	0.988	12.69	0.17	284.26	35.20	242.68	242.78	8 01.0	8 00.6
2427884.5	0.989	11.96	0.15	283.79	35.12	233.88	233.97	8 37.1	8 36.7
2427885.5	0.990	11.22	0.14	283.27	35.05	225.08	225.17	9 13.2	9 12.8
2427886.5	0.992	10.48	0.12	282.66	34.97	216.29	216.39	9 49.2	9 48.8
2427887.5	0.993	9.72	0.10	281.95	34.88	207.51	207.61	10 25.2	10 24.8
2427888.5	0.994	8.95	0.09	281.11	34.79	198.75	198.84	11 01.1	11 00.7
2427889.5	0.995	8.18	0.07	280.10	34.70	189.99	190.08	11 37.0	11 36.6
2427890.5	0.996	7.41	0.06	278.88	34.61	181.23	181.33	12 12.9	12 12.5
2427891.5	0.997	6.63	0.05	277.35	34.51	172.49	172.59	12 48.7	12 48.3
2427892.5	0.997	5.85	0.04	275.41	34.41	163.75	163.85	13 24.5	13 24.1
2427893.5	0.998	5.07	0.03	272.84	34.31	155.02	155.12	14 00.3	13 59.9
2427894.5	0.999	4.30	0.02	269.33	34.20	146.30	146.39	14 36.0	14 35.6
2427895.5	0.999	3.55	0.01	264.27	34.09	137.58	137.67	15 11.8	15 11.4
2427896.5	0.999	2.83	0.01	256.55	33.98	128.86	128.96	15 47.5	15 47.1
2427897.5	1.000	2.20	0.01	243.98	33.86	120.15	120.25	16 23.2	16 22.8
2427898.5	1.000	1.74	0.00	223.21	33.74	111.44	111.54	16 58.9	16 58.5
2427899.5	1.000	1.63	0.00	194.59	33.63	102.73	102.83	17 34.6	17 34.2
2427900.5	1.000	1.92	0.00	168.78	33.50	94.03	94.12	18 10.3	18 09.9
2427901.5	1.000	2.48	0.01	152.14	33.38	85.32	85.41	18 46.0	18 45.6
2427902.5	0.999	3.17	0.01	142.12	33.26	76.61	76.71	19 21.7	19 21.3
2427903.5	0.999	3.92	0.02	135.80	33.13	67.90	68.00	19 57.4	19 57.0
2427904.5	0.998	4.70	0.03	131.54	33.00	59.19	59.29	20 33.1	20 32.7
2427905.5	0.998	5.49	0.03	128.50	32.88	50.48	50.58	21 08.8	21 08.4
2427906.5	0.997	6.30	0.05	126.25	32.75	41.76	41.86	21 44.5	21 44.2
2427907.5	0.996	7.11	0.06	124.51	32.62	33.04	33.14	22 20.3	22 19.9
2427908.5	0.995	7.92	0.07	123.13	32.49	24.32	24.41	22 56.1	22 55.7
2427909.5	0.994	8.72	0.09	122.01	32.37	15.58	15.68	23 31.9	23 31.5
2427910.5	0.993	9.53	0.10	121.08	32.24	6.85	6.94	.. .. .	.. .. .
2427911.5	0.992	10.33	0.12	120.31	32.12	358.10	358.20	0 07.8	0 07.4
2427912.5	0.991	11.13	0.14	119.64	31.99	349.35	349.44	0 43.7	0 43.3
2427913.5	0.989	11.92	0.16	119.07	31.87	340.59	340.68	1 19.6	1 19.2
2427914.5	0.988	12.70	0.18	118.58	31.75	331.81	331.91	1 55.6	1 55.2
2427915.5	0.986	13.48	0.20	118.14	31.64	323.03	323.13	2 31.6	2 31.2
2427916.5	0.985	14.25	0.23	117.75	31.52	314.24	314.34	3 07.6	3 07.2
2427917.5	0.983	15.01	0.25	117.41	31.41	305.44	305.54	3 43.7	3 43.3
2427918.5	0.981	15.76	0.28	117.10	31.30	296.63	296.73	4 19.8	4 19.5
2427919.5	0.979	16.50	0.30	116.82	31.19	287.81	287.90	4 56.0	4 55.6
2427920.5	0.978	17.23	0.33	116.57	31.09	278.97	279.07	5 32.3	5 31.9
2427921.5	0.976	17.95	0.35	116.34	30.99	270.12	270.22	6 08.6	6 08.2
2427922.5	0.974	18.66	0.38	116.13	30.90	261.26	261.36	6 44.9	6 44.5
2427923.5	0.972	19.36	0.40	115.93	30.81	252.39	252.49	7 21.3	7 20.9
2427924.5	0.970	20.05	0.43	115.76	30.72	243.50	243.60	7 57.8	7 57.4
2427925.5	0.968	20.72	0.46	115.59	30.64	234.60	234.70	8 34.3	8 33.9
2427926.5	0.966	21.38	0.48	115.44	30.57	225.69	225.78	9 10.9	9 10.5
2427927.5	0.963	22.03	0.51	115.30	30.50	216.76	216.85	9 47.6	9 47.2
2427928.5	0.961	22.67	0.54	115.17	30.43	207.81	207.91	10 24.3	10 23.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2428642.5	5.33	-1.0	14.60	342.33	+ 6.86	-21.14	+16.12	138.47
2428643.5	5.28	1.0	14.74	342.29	6.92	20.61	15.96	138.97
2428644.5	5.22	1.0	14.89	342.24	6.98	20.07	15.80	139.46
2428645.5	5.17	1.0	15.03	342.18	7.05	19.52	15.63	139.96
2428646.5	5.12	1.1	15.18	342.10	7.12	18.96	15.47	140.45
2428647.5	5.08	-1.1	15.32	342.02	+ 7.21	-18.39	+15.30	140.95
2428648.5	5.03	1.1	15.47	341.92	7.29	17.81	15.13	141.45
2428649.5	4.98	1.2	15.61	341.81	7.39	17.22	14.96	141.95
2428650.5	4.94	1.2	15.75	341.70	7.49	16.61	14.79	142.45
2428651.5	4.89	1.2	15.89	341.57	7.59	16.00	14.62	142.95
2428652.5	4.85	-1.3	16.03	341.43	+ 7.70	-15.37	+14.44	143.45
2428653.5	4.81	1.3	16.17	341.27	7.82	14.73	14.27	143.96
2428654.5	4.77	1.3	16.31	341.11	7.95	14.08	14.09	144.46
2428655.5	4.73	1.4	16.44	340.94	8.07	13.43	13.92	144.96
2428656.5	4.69	1.4	16.57	340.75	8.21	12.76	13.74	145.47
2428657.5	4.66	-1.4	16.70	340.56	+ 8.35	-12.07	+13.56	145.97
2428658.5	4.62	1.4	16.83	340.36	8.49	11.38	13.37	146.48
2428659.5	4.59	1.5	16.95	340.14	8.64	10.68	13.19	146.99
2428660.5	4.56	1.5	17.07	339.92	8.80	9.97	13.01	147.49
2428661.5	4.53	1.5	17.18	339.69	8.96	9.25	12.82	148.00
2428662.5	4.50	-1.6	17.29	339.45	+ 9.12	- 8.53	+12.64	148.51
2428663.5	4.47	1.6	17.40	339.20	9.29	7.79	12.45	149.02
2428664.5	4.44	1.6	17.50	338.94	9.46	7.05	12.26	149.54
2428665.5	4.42	1.6	17.60	338.67	9.64	6.29	12.07	150.05
2428666.5	4.39	1.7	17.70	338.40	9.82	5.53	11.88	150.56
2428667.5	4.37	-1.7	17.78	338.12	+10.00	- 4.77	+11.69	151.08
2428668.5	4.35	1.7	17.87	337.84	10.18	4.00	11.49	151.59
2428669.5	4.33	1.7	17.94	337.55	10.37	3.22	11.30	152.11
2428670.5	4.32	1.8	18.02	337.26	10.56	2.44	11.10	152.62
2428671.5	4.30	1.8	18.08	336.96	10.75	1.65	10.91	153.14
2428672.5	4.29	-1.8	18.14	336.66	+10.94	- 0.87	+10.71	153.66
2428673.5	4.27	1.8	18.20	336.35	11.13	- 0.07	10.51	154.18
2428674.5	4.26	1.8	18.24	336.05	11.32	+ 0.72	10.31	154.70
2428675.5	4.25	1.8	18.29	335.74	11.51	1.52	10.11	155.22
2428676.5	4.25	1.8	18.32	335.44	11.70	2.31	9.91	155.74
2428677.5	4.24	-1.8	18.35	335.13	+11.89	+ 3.11	+ 9.71	156.27
2428678.5	4.23	1.8	18.37	334.82	12.08	3.91	9.50	156.79
2428679.5	4.23	1.8	18.39	334.51	12.27	4.70	9.30	157.32
2428680.5	4.23	1.8	18.40	334.21	12.46	5.49	9.09	157.84
2428681.5	4.23	1.8	18.41	333.91	12.64	6.29	8.88	158.37
2428682.5	4.23	-1.7	18.40	333.61	+12.82	+ 7.08	+ 8.67	158.90
2428683.5	4.23	1.7	18.40	333.32	13.00	7.86	8.47	159.42
2428684.5	4.23	1.7	18.38	333.03	13.18	8.64	8.26	159.95
2428685.5	4.24	1.7	18.36	332.74	13.35	9.42	8.04	160.48
2428686.5	4.24	1.7	18.33	332.46	13.52	10.19	7.83	161.01
2428687.5	4.25	-1.7	18.30	332.19	+13.68	+10.95	+ 7.62	161.55
2428688.5	4.26	1.7	18.26	331.93	13.84	11.71	7.41	162.08
2428689.5	4.27	1.6	18.22	331.67	14.00	12.46	7.19	162.61
2428690.5	4.28	1.6	18.17	331.42	14.15	13.20	6.97	163.15
2428691.5	4.29	1.6	18.12	331.18	14.29	13.94	6.76	163.68
2428692.5	4.31	-1.6	18.06	330.94	+14.44	+14.66	+ 6.54	164.22
2428693.5	4.32	1.6	18.00	330.72	14.57	15.38	6.32	164.76
2428694.5	4.34	1.6	17.93	330.51	14.70	16.09	6.10	165.30
2428695.5	4.36	1.5	17.86	330.31	14.83	16.78	5.88	165.84
2428696.5	4.37	1.5	17.78	330.12	14.94	17.47	5.66	166.38
2428697.5	4.39	-1.5	17.70	329.94	+15.06	+18.15	+ 5.44	166.92
2428698.5	4.42	1.5	17.62	329.77	15.16	18.81	5.22	167.46
2428699.5	4.44	1.5	17.53	329.62	15.26	19.46	4.99	168.00
2428700.5	4.46	1.4	17.44	329.47	15.36	20.10	4.77	168.55
2428701.5	4.48	1.4	17.35	329.34	15.45	20.73	4.55	169.09
2428702.5	4.51	-1.4	17.25	329.22	+15.53	+21.35	+ 4.32	169.64

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2428642.5	0.961	22.66	0.56	279.53	35.50	126.34	126.43	15 58.8	15 58.4
2428643.5	0.963	22.10	0.54	279.58	35.52	117.28	117.38	16 35.9	16 35.5
2428644.5	0.965	21.53	0.52	279.64	35.54	108.24	108.34	17 13.0	17 12.6
2428645.5	0.967	20.95	0.50	279.70	35.57	99.21	99.30	17 50.0	17 49.6
2428646.5	0.969	20.36	0.47	279.77	35.60	90.18	90.28	18 27.0	18 26.6
2428647.5	0.971	19.75	0.45	279.86	35.63	81.17	81.27	19 03.9	19 03.5
2428648.5	0.972	19.13	0.43	279.95	35.67	72.17	72.27	19 40.8	19 40.4
2428649.5	0.974	18.49	0.40	280.05	35.71	63.18	63.28	20 17.6	20 17.2
2428650.5	0.976	17.84	0.38	280.16	35.75	54.21	54.30	20 54.4	20 54.0
2428651.5	0.978	17.18	0.35	280.29	35.80	45.24	45.33	21 31.2	21 30.8
2428652.5	0.979	16.50	0.33	280.43	35.85	36.28	36.38	22 07.9	22 07.5
2428653.5	0.981	15.82	0.31	280.58	35.90	27.33	27.43	22 44.5	22 44.1
2428654.5	0.983	15.12	0.28	280.75	35.95	18.40	18.49	23 21.1	23 20.7
2428655.5	0.984	14.40	0.26	280.93	36.01	9.47	9.57	23 57.7	23 57.3
2428656.5	0.986	13.68	0.23	281.14	36.07	0.56	0.65	.. .. .	.. .. .
2428657.5	0.987	12.94	0.21	281.36	36.14	351.65	351.75	0 34.2	0 33.8
2428658.5	0.989	12.19	0.19	281.61	36.20	342.76	342.85	1 10.7	1 10.3
2428659.5	0.990	11.42	0.17	281.89	36.27	333.87	333.97	1 47.2	1 46.8
2428660.5	0.991	10.65	0.15	282.20	36.34	324.99	325.09	2 23.6	2 23.2
2428661.5	0.993	9.87	0.13	282.55	36.41	316.13	316.22	2 59.9	2 59.5
2428662.5	0.994	9.07	0.11	282.96	36.48	307.27	307.36	3 36.2	3 35.9
2428663.5	0.995	8.27	0.09	283.43	36.55	298.42	298.51	4 12.5	4 12.1
2428664.5	0.996	7.46	0.07	283.99	36.63	289.57	289.67	4 48.8	4 48.4
2428665.5	0.997	6.63	0.06	284.67	36.70	280.73	280.83	5 25.0	5 24.6
2428666.5	0.997	5.81	0.05	285.52	36.78	271.90	272.00	6 01.2	6 00.8
2428667.5	0.998	4.97	0.03	286.62	36.86	263.08	263.18	6 37.4	6 37.0
2428668.5	0.999	4.13	0.02	288.13	36.93	254.26	254.36	7 13.6	7 13.2
2428669.5	0.999	3.29	0.01	290.37	37.01	245.45	245.54	7 49.7	7 49.3
2428670.5	1.000	2.45	0.01	294.07	37.09	236.64	236.73	8 25.8	8 25.4
2428671.5	1.000	1.63	0.00	301.48	37.16	227.83	227.92	9 01.9	9 01.5
2428672.5	1.000	0.88	0.00	322.49	37.24	219.02	219.12	9 38.0	9 37.6
2428673.5	1.000	0.63	0.00	31.14	37.32	210.22	210.32	10 14.1	10 13.7
2428674.5	1.000	1.24	0.00	72.60	37.39	201.42	201.52	10 50.2	10 49.8
2428675.5	1.000	2.05	0.01	84.36	37.46	192.62	192.72	11 26.3	11 25.9
2428676.5	0.999	2.90	0.01	89.44	37.53	183.83	183.92	12 02.4	12 02.0
2428677.5	0.999	3.76	0.02	92.28	37.60	175.03	175.12	12 38.4	12 38.0
2428678.5	0.998	4.63	0.03	94.11	37.67	166.23	166.32	13 14.5	13 14.1
2428679.5	0.998	5.50	0.04	95.41	37.74	157.43	157.52	13 50.6	13 50.2
2428680.5	0.997	6.37	0.06	96.39	37.80	148.62	148.72	14 26.7	14 26.3
2428681.5	0.996	7.23	0.07	97.16	37.87	139.82	139.91	15 02.8	15 02.4
2428682.5	0.995	8.10	0.09	97.80	37.93	131.01	131.10	15 39.0	15 38.6
2428683.5	0.994	8.96	0.11	98.34	37.99	122.19	122.29	16 15.1	16 14.7
2428684.5	0.993	9.82	0.13	98.80	38.04	113.37	113.47	16 51.3	16 50.9
2428685.5	0.991	10.67	0.16	99.21	38.10	104.55	104.64	17 27.5	17 27.1
2428686.5	0.990	11.51	0.18	99.58	38.15	95.72	95.81	18 03.7	18 03.3
2428687.5	0.988	12.35	0.21	99.91	38.20	86.88	86.98	18 40.0	18 39.6
2428688.5	0.987	13.19	0.24	100.21	38.25	78.04	78.13	19 16.3	19 15.9
2428689.5	0.985	14.01	0.27	100.49	38.29	69.18	69.28	19 52.6	19 52.2
2428690.5	0.983	14.83	0.30	100.74	38.34	60.32	60.42	20 29.0	20 28.6
2428691.5	0.981	15.64	0.34	100.98	38.38	51.45	51.55	21 05.4	21 05.0
2428692.5	0.980	16.43	0.37	101.20	38.42	42.57	42.67	21 41.9	21 41.5
2428693.5	0.978	17.22	0.40	101.41	38.45	33.68	33.78	22 18.4	22 18.0
2428694.5	0.976	18.00	0.44	101.61	38.49	24.78	24.88	22 54.9	22 54.5
2428695.5	0.973	18.77	0.47	101.79	38.52	15.87	15.97	23 31.5	23 31.1
2428696.5	0.971	19.52	0.51	101.97	38.55	6.95	7.05	.. .. .	.. .. .
2428697.5	0.969	20.27	0.55	102.13	38.58	358.02	358.11	0 08.1	0 07.7
2428698.5	0.967	21.00	0.59	102.28	38.60	349.07	349.17	0 44.8	0 44.4
2428699.5	0.965	21.72	0.62	102.43	38.63	340.11	340.21	1 21.6	1 21.2
2428700.5	0.962	22.43	0.66	102.57	38.65	331.14	331.24	1 58.4	1 58.0
2428701.5	0.960	23.12	0.70	102.69	38.67	322.16	322.26	2 35.2	2 34.8
2428702.5	0.957	23.80	0.73	102.82	38.69	313.16	313.26	3 12.2	3 11.8

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2429437.5	3.92	-1.8	19.83	38.63	-13.27	-23.14	- 7.02	196.97
2429438.5	3.89	1.8	20.02	38.64	13.19	22.61	7.26	197.56
2429439.5	3.85	1.9	20.21	38.65	13.12	22.07	7.50	198.15
2429440.5	3.81	1.9	20.40	38.64	13.03	21.51	7.74	198.75
2429441.5	3.78	1.9	20.59	38.62	12.95	20.95	7.97	199.34
2429442.5	3.74	-2.0	20.78	38.59	-12.86	-20.36	- 8.21	199.94
2429443.5	3.71	2.0	20.96	38.55	12.76	19.77	8.45	200.53
2429444.5	3.68	2.0	21.14	38.50	12.67	19.16	8.68	201.13
2429445.5	3.65	2.0	21.32	38.43	12.56	18.54	8.92	201.73
2429446.5	3.62	2.1	21.50	38.35	12.46	17.90	9.16	202.33
2429447.5	3.59	-2.1	21.68	38.26	-12.35	-17.25	- 9.39	202.92
2429448.5	3.56	2.1	21.85	38.16	12.24	16.59	9.62	203.52
2429449.5	3.53	2.2	22.02	38.05	12.13	15.92	9.86	204.13
2429450.5	3.51	2.2	22.18	37.92	12.01	15.23	10.09	204.73
2429451.5	3.48	2.2	22.34	37.79	11.89	14.53	10.32	205.33
2429452.5	3.46	-2.2	22.49	37.64	-11.77	-13.82	-10.55	205.93
2429453.5	3.44	2.3	22.64	37.49	11.64	13.10	10.79	206.54
2429454.5	3.41	2.3	22.79	37.32	11.52	12.36	11.02	207.14
2429455.5	3.39	2.3	22.92	37.15	11.39	11.61	11.25	207.75
2429456.5	3.37	2.3	23.06	36.96	11.26	10.86	11.47	208.35
2429457.5	3.36	-2.4	23.18	36.77	-11.12	-10.09	-11.70	208.96
2429458.5	3.34	2.4	23.30	36.57	10.99	9.31	11.93	209.57
2429459.5	3.32	2.4	23.41	36.36	10.86	8.52	12.16	210.18
2429460.5	3.31	2.4	23.52	36.14	10.72	7.73	12.38	210.79
2429461.5	3.29	2.5	23.61	35.92	10.59	6.92	12.60	211.40
2429462.5	3.28	-2.5	23.70	35.69	-10.45	- 6.11	-12.83	212.01
2429463.5	3.27	2.5	23.79	35.46	10.32	5.29	13.05	212.62
2429464.5	3.26	2.5	23.86	35.22	10.19	4.47	13.27	213.23
2429465.5	3.25	2.5	23.92	34.98	10.06	3.64	13.49	213.85
2429466.5	3.24	2.5	23.98	34.73	9.92	2.80	13.71	214.46
2429467.5	3.24	-2.5	24.03	34.48	- 9.80	- 1.96	-13.93	215.07
2429468.5	3.23	2.5	24.06	34.23	9.67	1.12	14.14	215.69
2429469.5	3.23	2.5	24.09	33.98	9.54	- 0.27	14.36	216.30
2429470.5	3.23	2.5	24.12	33.73	9.42	+ 0.57	14.57	216.92
2429471.5	3.22	2.5	24.13	33.48	9.30	1.42	14.79	217.54
2429472.5	3.22	-2.5	24.13	33.23	- 9.19	+ 2.27	-15.00	218.15
2429473.5	3.22	2.5	24.13	32.98	9.08	3.12	15.21	218.77
2429474.5	3.23	2.5	24.11	32.74	8.97	3.97	15.42	219.39
2429475.5	3.23	2.5	24.09	32.49	8.86	4.82	15.62	220.01
2429476.5	3.23	2.5	24.06	32.26	8.76	5.67	15.83	220.63
2429477.5	3.24	-2.5	24.02	32.02	- 8.67	+ 6.51	-16.03	221.25
2429478.5	3.24	2.5	23.97	31.79	8.58	7.35	16.23	221.87
2429479.5	3.25	2.4	23.91	31.57	8.49	8.19	16.44	222.49
2429480.5	3.26	2.4	23.85	31.35	8.41	9.02	16.64	223.12
2429481.5	3.27	2.4	23.78	31.14	8.34	9.85	16.83	223.74
2429482.5	3.28	-2.4	23.70	30.93	- 8.27	+10.67	-17.03	224.36
2429483.5	3.29	2.4	23.61	30.73	8.20	11.49	17.22	224.99
2429484.5	3.31	2.4	23.52	30.55	8.14	12.30	17.42	225.61
2429485.5	3.32	2.3	23.42	30.36	8.09	13.11	17.61	226.23
2429486.5	3.34	2.3	23.31	30.19	8.05	13.90	17.80	226.86
2429487.5	3.35	-2.3	23.20	30.03	- 8.01	+14.69	-17.98	227.49
2429488.5	3.37	2.3	23.08	29.88	7.97	15.48	18.17	228.11
2429489.5	3.39	2.3	22.96	29.74	7.95	16.25	18.35	228.74
2429490.5	3.41	2.2	22.83	29.61	7.93	17.01	18.53	229.37
2429491.5	3.43	2.2	22.70	29.49	7.92	17.77	18.71	229.99
2429492.5	3.45	-2.2	22.56	29.38	- 7.91	+18.51	-18.89	230.62
2429493.5	3.47	2.2	22.42	29.28	7.91	19.25	19.07	231.25
2429494.5	3.49	2.1	22.27	29.19	7.92	19.97	19.24	231.88
2429495.5	3.52	2.1	22.12	29.12	7.93	20.69	19.41	232.51
2429496.5	3.54	2.1	21.97	29.06	7.95	21.39	19.58	233.14
2429497.5	3.57	-2.1	21.81	29.01	- 7.98	+22.09	-19.75	233.77

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.		Time of Transit of Zero Meridian U.T.	
		°	"	°	°	°	°	h	m	h	m
2429437.5	0.958	23.60	0.83	262.24	5.29	29.50	29.59	22	36.4	22	36.0
2429438.5	0.960	23.01	0.80	262.59	5.28	20.38	20.48	23	13.7	23	13.3
2429439.5	0.962	22.41	0.76	262.96	5.28	11.28	11.37	23	51.0	23	50.6
2429440.5	0.964	21.80	0.73	263.37	5.29	2.18	2.28	..	.. .	..	.. .
2429441.5	0.966	21.17	0.69	263.81	5.31	353.10	353.20	0	28.3	0	27.9
2429442.5	0.968	20.54	0.66	264.29	5.33	344.03	344.13	1	05.5	1	05.1
2429443.5	0.970	19.89	0.63	264.81	5.36	334.98	335.07	1	42.7	1	42.3
2429444.5	0.972	19.23	0.59	265.37	5.40	325.93	326.03	2	19.8	2	19.4
2429445.5	0.974	18.56	0.55	265.98	5.45	316.90	316.99	2	56.8	2	56.4
2429446.5	0.976	17.88	0.52	266.65	5.50	307.87	307.97	3	33.9	3	33.5
2429447.5	0.978	17.19	0.48	267.37	5.57	298.86	298.96	4	10.8	4	10.4
2429448.5	0.979	16.49	0.45	268.17	5.64	289.86	289.96	4	47.7	4	47.3
2429449.5	0.981	15.78	0.41	269.05	5.72	280.87	280.97	5	24.6	5	24.2
2429450.5	0.983	15.06	0.38	270.01	5.80	271.90	271.99	6	01.4	6	01.0
2429451.5	0.984	14.34	0.35	271.08	5.90	262.93	263.03	6	38.2	6	37.8
2429452.5	0.986	13.60	0.32	272.27	6.00	253.97	254.07	7	14.9	7	14.5
2429453.5	0.987	12.87	0.28	273.60	6.11	245.03	245.12	7	51.6	7	51.2
2429454.5	0.989	12.13	0.25	275.10	6.22	236.09	236.18	8	28.3	8	27.9
2429455.5	0.990	11.38	0.23	276.80	6.34	227.16	227.26	9	04.9	9	04.5
2429456.5	0.991	10.64	0.20	278.73	6.47	218.24	218.34	9	41.4	9	41.0
2429457.5	0.993	9.90	0.17	280.96	6.60	209.33	209.43	10	18.0	10	17.6
2429458.5	0.994	9.17	0.15	283.55	6.74	200.43	200.53	10	54.5	10	54.1
2429459.5	0.995	8.45	0.13	286.58	6.89	191.53	191.63	11	30.9	11	30.5
2429460.5	0.995	7.74	0.11	290.17	7.04	182.64	182.74	12	07.4	12	07.0
2429461.5	0.996	7.07	0.09	294.46	7.19	173.76	173.86	12	43.8	12	43.4
2429462.5	0.997	6.43	0.07	299.62	7.35	164.89	164.98	13	20.2	13	19.8
2429463.5	0.997	5.85	0.06	305.85	7.51	156.02	156.11	13	56.5	13	56.1
2429464.5	0.998	5.35	0.05	313.36	7.67	147.15	147.25	14	32.9	14	32.5
2429465.5	0.998	4.95	0.04	322.25	7.84	138.29	138.38	15	09.2	15	08.8
2429466.5	0.998	4.67	0.04	332.45	8.01	129.43	129.52	15	45.6	15	45.2
2429467.5	0.998	4.56	0.04	343.53	8.18	120.57	120.66	16	21.9	16	21.5
2429468.5	0.998	4.61	0.04	354.80	8.35	111.71	111.81	16	58.2	16	57.8
2429469.5	0.998	4.82	0.04	5.44	8.53	102.85	102.95	17	34.5	17	34.1
2429470.5	0.998	5.18	0.05	14.93	8.70	94.00	94.10	18	10.8	18	10.4
2429471.5	0.998	5.66	0.06	23.03	8.87	85.14	85.24	18	47.2	18	46.8
2429472.5	0.997	6.22	0.07	29.80	9.04	76.28	76.38	19	23.5	19	23.1
2429473.5	0.996	6.85	0.09	35.41	9.21	67.42	67.52	19	59.9	19	59.5
2429474.5	0.996	7.53	0.10	40.07	9.38	58.56	58.66	20	36.2	20	35.8
2429475.5	0.995	8.24	0.12	43.97	9.55	49.69	49.79	21	12.6	21	12.2
2429476.5	0.994	8.98	0.15	47.26	9.71	40.82	40.92	21	49.0	21	48.6
2429477.5	0.993	9.73	0.17	50.06	9.87	31.95	32.04	22	25.4	22	25.0
2429478.5	0.992	10.50	0.20	52.47	10.03	23.07	23.16	23	01.8	23	01.4
2429479.5	0.990	11.27	0.23	54.57	10.18	14.18	14.28	23	38.3	23	37.9
2429480.5	0.989	12.05	0.26	56.41	10.33	5.29	5.39	..	.. .	..	.. .
2429481.5	0.988	12.83	0.30	58.03	10.48	356.39	356.49	0	14.8	0	14.4
2429482.5	0.986	13.61	0.33	59.48	10.62	347.49	347.58	0	51.3	0	50.9
2429483.5	0.984	14.38	0.37	60.78	10.75	338.57	338.67	1	27.9	1	27.5
2429484.5	0.983	15.16	0.41	61.95	10.88	329.65	329.75	2	04.5	2	04.1
2429485.5	0.981	15.92	0.45	63.02	11.00	320.72	320.82	2	41.1	2	40.7
2429486.5	0.979	16.68	0.49	63.98	11.11	311.78	311.88	3	17.8	3	17.4
2429487.5	0.977	17.44	0.53	64.87	11.22	302.83	302.93	3	54.5	3	54.1
2429488.5	0.975	18.18	0.58	65.69	11.32	293.87	293.97	4	31.3	4	30.9
2429489.5	0.973	18.92	0.62	66.44	11.42	284.90	285.00	5	08.1	5	07.7
2429490.5	0.971	19.65	0.66	67.13	11.50	275.92	276.01	5	44.9	5	44.5
2429491.5	0.969	20.36	0.71	67.77	11.58	266.92	267.02	6	21.9	6	21.5
2429492.5	0.967	21.07	0.75	68.37	11.65	257.92	258.02	6	58.8	6	58.4
2429493.5	0.964	21.76	0.80	68.92	11.71	248.90	249.00	7	35.8	7	35.4
2429494.5	0.962	22.45	0.84	69.43	11.77	239.88	239.97	8	12.9	8	12.5
2429495.5	0.960	23.12	0.89	69.91	11.81	230.84	230.93	8	50.0	8	49.6
2429496.5	0.958	23.78	0.93	70.35	11.85	221.78	221.88	9	27.2	9	26.8
2429497.5	0.955	24.42	0.98	70.77	11.88	212.72	212.81	10	04.4	10	04.0

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2430247.5	3.72	-1.9	20.89	120.76	-17.85	-26.77	-24.71	273.62
2430248.5	3.70	2.0	21.03	120.71	17.87	26.03	24.69	274.25
2430249.5	3.67	2.0	21.17	120.64	17.90	25.28	24.67	274.87
2430250.5	3.65	2.0	21.30	120.56	17.93	24.51	24.64	275.50
2430251.5	3.63	2.0	21.43	120.46	17.97	23.73	24.61	276.12
2430252.5	3.61	-2.1	21.55	120.36	-18.01	-22.93	-24.58	276.75
2430253.5	3.59	2.1	21.67	120.23	18.06	22.13	24.54	277.37
2430254.5	3.57	2.1	21.79	120.09	18.11	21.30	24.51	277.99
2430255.5	3.55	2.1	21.90	119.94	18.17	20.47	24.46	278.62
2430256.5	3.53	2.1	22.01	119.78	18.23	19.62	24.42	279.24
2430257.5	3.52	-2.2	22.11	119.60	-18.30	-18.77	-24.37	279.86
2430258.5	3.50	2.2	22.20	119.41	18.37	17.90	24.32	280.48
2430259.5	3.49	2.2	22.29	119.21	18.44	17.02	24.27	281.10
2430260.5	3.48	2.2	22.37	118.99	18.52	16.13	24.21	281.72
2430261.5	3.46	2.2	22.45	118.77	18.61	15.22	24.15	282.34
2430262.5	3.45	-2.3	22.52	118.53	-18.70	-14.31	-24.09	282.96
2430263.5	3.44	2.3	22.58	118.28	18.79	13.39	24.03	283.57
2430264.5	3.44	2.3	22.64	118.03	18.88	12.47	23.96	284.19
2430265.5	3.43	2.3	22.69	117.76	18.98	11.53	23.89	284.81
2430266.5	3.42	2.3	22.73	117.49	19.09	10.59	23.81	285.42
2430267.5	3.42	-2.3	22.76	117.21	-19.19	- 9.65	-23.74	286.04
2430268.5	3.41	2.4	22.78	116.92	19.30	8.69	23.66	286.65
2430269.5	3.41	2.4	22.80	116.63	19.41	7.74	23.58	287.27
2430270.5	3.41	2.4	22.80	116.33	19.53	6.77	23.49	287.88
2430271.5	3.41	2.4	22.80	116.03	19.64	5.81	23.41	288.49
2430272.5	3.41	-2.4	22.79	115.72	-19.76	- 4.84	-23.32	289.10
2430273.5	3.42	2.4	22.77	115.41	19.88	3.88	23.22	289.71
2430274.5	3.42	2.4	22.74	115.10	20.00	2.91	23.13	290.32
2430275.5	3.42	2.4	22.71	114.79	20.12	1.94	23.03	290.93
2430276.5	3.43	2.4	22.66	114.47	20.25	0.97	22.93	291.54
2430277.5	3.44	-2.4	22.61	114.16	-20.37	- 0.01	-22.83	292.15
2430278.5	3.45	2.4	22.55	113.84	20.49	+ 0.95	22.72	292.76
2430279.5	3.46	2.4	22.48	113.53	20.62	1.91	22.61	293.36
2430280.5	3.47	2.4	22.40	113.22	20.74	2.87	22.50	293.97
2430281.5	3.48	2.4	22.32	112.92	20.87	3.82	22.39	294.58
2430282.5	3.50	-2.4	22.22	112.61	-20.99	+ 4.76	-22.28	295.18
2430283.5	3.52	2.3	22.12	112.32	21.11	5.69	22.16	295.78
2430284.5	3.53	2.3	22.01	112.03	21.23	6.62	22.04	296.39
2430285.5	3.55	2.3	21.90	111.74	21.36	7.54	21.92	296.99
2430286.5	3.57	2.3	21.77	111.46	21.48	8.45	21.79	297.59
2430287.5	3.59	-2.2	21.64	111.20	-21.59	+ 9.35	-21.66	298.19
2430288.5	3.62	2.2	21.51	110.94	21.71	10.24	21.54	298.79
2430289.5	3.64	2.2	21.36	110.69	21.83	11.12	21.40	299.39
2430290.5	3.67	2.1	21.22	110.45	21.94	11.99	21.27	299.99
2430291.5	3.69	2.1	21.06	110.22	22.05	12.84	21.14	300.58
2430292.5	3.72	-2.1	20.91	110.00	-22.16	+13.68	-21.00	301.18
2430293.5	3.75	2.1	20.74	109.79	22.26	14.51	20.86	301.77
2430294.5	3.78	2.0	20.58	109.60	22.37	15.32	20.72	302.37
2430295.5	3.81	2.0	20.41	109.42	22.47	16.12	20.58	302.96
2430296.5	3.84	2.0	20.23	109.25	22.57	16.90	20.43	303.55
2430297.5	3.88	-1.9	20.06	109.09	-22.66	+17.66	-20.28	304.15
2430298.5	3.91	1.9	19.88	108.95	22.76	18.42	20.13	304.74
2430299.5	3.95	1.9	19.70	108.82	22.85	19.15	19.98	305.33
2430300.5	3.99	1.8	19.51	108.71	22.93	19.87	19.83	305.92
2430301.5	4.02	1.8	19.33	108.61	23.02	20.57	19.67	306.51
2430302.5	4.06	-1.8	19.14	108.52	-23.10	+21.26	-19.52	307.09
2430303.5	4.10	1.7	18.95	108.45	23.18	21.93	19.36	307.68
2430304.5	4.15	1.7	18.76	108.39	23.26	22.59	19.20	308.27
2430305.5	4.19	1.7	18.57	108.35	23.33	23.23	19.04	308.85
2430306.5	4.23	1.6	18.38	108.32	23.40	23.85	18.88	309.43
2430307.5	4.28	-1.6	18.19	108.30	-23.47	+24.46	-18.71	310.02

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2430247.5	0.950	25.82	1.04	254.51	324.47	129.90	130.00	15 44.1	15 43.7
2430248.5	0.953	25.15	1.00	254.71	324.48	120.85	120.95	16 21.2	16 20.8
2430249.5	0.955	24.46	0.95	254.93	324.49	111.81	111.92	16 58.3	16 57.8
2430250.5	0.958	23.76	0.90	255.15	324.51	102.79	102.89	17 35.2	17 34.8
2430251.5	0.960	23.04	0.85	255.39	324.53	93.79	93.89	18 12.1	18 11.7
2430252.5	0.963	22.31	0.81	255.64	324.56	84.79	84.89	18 49.0	18 48.6
2430253.5	0.965	21.57	0.76	255.91	324.59	75.81	75.91	19 25.8	19 25.4
2430254.5	0.967	20.82	0.71	256.20	324.62	66.85	66.95	20 02.5	20 02.1
2430255.5	0.970	20.05	0.66	256.50	324.65	57.90	58.00	20 39.2	20 38.8
2430256.5	0.972	19.27	0.62	256.83	324.69	48.96	49.06	21 15.8	21 15.4
2430257.5	0.974	18.48	0.57	257.18	324.73	40.03	40.13	21 52.4	21 52.0
2430258.5	0.976	17.68	0.52	257.57	324.77	31.12	31.22	22 28.9	22 28.5
2430259.5	0.978	16.86	0.48	257.99	324.82	22.21	22.32	23 05.4	23 04.9
2430260.5	0.981	16.04	0.44	258.45	324.87	13.32	13.42	23 41.8	23 41.4
2430261.5	0.982	15.21	0.39	258.97	324.93	4.44	4.54	.. ..	.. ..
2430262.5	0.984	14.36	0.35	259.54	324.98	355.57	355.68	0 18.1	0 17.7
2430263.5	0.986	13.51	0.31	260.19	325.04	346.72	346.82	0 54.5	0 54.1
2430264.5	0.988	12.65	0.27	260.92	325.11	337.87	337.97	1 30.8	1 30.4
2430265.5	0.989	11.79	0.24	261.77	325.17	329.02	329.12	2 07.0	2 06.6
2430266.5	0.991	10.92	0.21	262.74	325.24	320.19	320.29	2 43.2	2 42.8
2430267.5	0.992	10.05	0.17	263.89	325.31	311.36	311.46	3 19.4	3 19.0
2430268.5	0.994	9.18	0.15	265.25	325.39	302.54	302.64	3 55.6	3 55.2
2430269.5	0.995	8.31	0.12	266.90	325.46	293.73	293.83	4 31.7	4 31.3
2430270.5	0.996	7.44	0.10	268.95	325.54	284.92	285.02	5 07.8	5 07.4
2430271.5	0.997	6.58	0.08	271.52	325.62	276.12	276.22	5 43.9	5 43.5
2430272.5	0.997	5.73	0.06	274.87	325.71	267.31	267.41	6 20.0	6 19.6
2430273.5	0.998	4.91	0.04	279.35	325.79	258.52	258.62	6 56.1	6 55.7
2430274.5	0.999	4.13	0.03	285.58	325.88	249.72	249.82	7 32.2	7 31.8
2430275.5	0.999	3.42	0.02	294.55	325.96	240.92	241.02	8 08.2	8 07.8
2430276.5	0.999	2.83	0.01	307.67	326.05	232.13	232.23	8 44.3	8 43.9
2430277.5	1.000	2.46	0.01	326.07	326.14	223.33	223.43	9 20.4	9 19.9
2430278.5	1.000	2.40	0.01	347.87	326.23	214.54	214.64	9 56.4	9 56.0
2430279.5	0.999	2.67	0.01	7.76	326.32	205.74	205.84	10 32.5	10 32.1
2430280.5	0.999	3.20	0.02	22.49	326.41	196.94	197.04	11 08.6	11 08.2
2430281.5	0.999	3.86	0.03	32.59	326.51	188.13	188.23	11 44.7	11 44.3
2430282.5	0.998	4.61	0.04	39.55	326.60	179.32	179.42	12 20.9	12 20.4
2430283.5	0.998	5.40	0.05	44.50	326.69	170.50	170.61	12 57.0	12 56.6
2430284.5	0.997	6.21	0.06	48.14	326.77	161.68	161.78	13 33.2	13 32.8
2430285.5	0.996	7.04	0.08	50.92	326.86	152.86	152.96	14 09.4	14 09.0
2430286.5	0.995	7.87	0.10	53.10	326.95	144.02	144.12	14 45.7	14 45.3
2430287.5	0.994	8.70	0.12	54.84	327.03	135.17	135.28	15 22.0	15 21.6
2430288.5	0.993	9.53	0.15	56.27	327.11	126.32	126.42	15 58.3	15 57.9
2430289.5	0.992	10.35	0.17	57.46	327.19	117.46	117.56	16 34.7	16 34.3
2430290.5	0.991	11.17	0.20	58.47	327.27	108.58	108.68	17 11.1	17 10.7
2430291.5	0.989	11.98	0.23	59.33	327.34	99.70	99.80	17 47.6	17 47.2
2430292.5	0.988	12.77	0.26	60.07	327.41	90.80	90.90	18 24.1	18 23.7
2430293.5	0.986	13.56	0.29	60.71	327.48	81.89	81.99	19 00.7	19 00.3
2430294.5	0.984	14.34	0.32	61.28	327.54	72.97	73.07	19 37.3	19 36.9
2430295.5	0.983	15.11	0.35	61.78	327.60	64.04	64.14	20 14.0	20 13.6
2430296.5	0.981	15.86	0.39	62.23	327.66	55.09	55.19	20 50.8	20 50.4
2430297.5	0.979	16.60	0.42	62.63	327.71	46.13	46.23	21 27.6	21 27.2
2430298.5	0.977	17.33	0.45	62.99	327.76	37.15	37.25	22 04.5	22 04.0
2430299.5	0.975	18.05	0.48	63.32	327.80	28.16	28.27	22 41.4	22 41.0
2430300.5	0.973	18.75	0.52	63.61	327.84	19.16	19.26	23 18.4	23 18.0
2430301.5	0.971	19.44	0.55	63.88	327.87	10.15	10.25	23 55.4	23 55.0
2430302.5	0.970	20.11	0.58	64.13	327.90	1.11	1.21	.. ..	.. ..
2430303.5	0.967	20.78	0.62	64.36	327.92	352.07	352.17	0 32.5	0 32.1
2430304.5	0.965	21.42	0.65	64.57	327.94	343.01	343.11	1 09.7	1 09.3
2430305.5	0.963	22.06	0.68	64.76	327.95	333.93	334.03	1 47.0	1 46.6
2430306.5	0.961	22.68	0.71	64.94	327.96	324.84	324.95	2 24.3	2 23.9
2430307.5	0.959	23.28	0.74	65.10	327.96	315.74	315.84	3 01.6	3 01.2

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2431033.5	4.88	-1.2	15.94	177.51	- 0.70	-23.22	-11.32	332.06
2431034.5	4.85	1.2	16.04	177.42	0.80	22.62	11.11	332.61
2431035.5	4.82	1.3	16.13	177.32	0.91	22.01	10.90	333.15
2431036.5	4.79	1.3	16.23	177.21	1.02	21.38	10.70	333.70
2431037.5	4.76	1.3	16.32	177.08	1.14	20.75	10.49	334.24
2431038.5	4.74	-1.3	16.41	176.95	- 1.26	-20.10	-10.28	334.78
2431039.5	4.71	1.3	16.50	176.79	1.39	19.44	10.07	335.32
2431040.5	4.69	1.4	16.59	176.63	1.53	18.77	9.86	335.86
2431041.5	4.67	1.4	16.67	176.46	1.67	18.09	9.65	336.40
2431042.5	4.64	1.4	16.75	176.27	1.82	17.40	9.44	336.94
2431043.5	4.62	-1.4	16.82	176.07	- 1.98	-16.70	- 9.23	337.48
2431044.5	4.60	1.4	16.89	175.86	2.14	15.99	9.02	338.01
2431045.5	4.59	1.5	16.96	175.64	2.31	15.28	8.81	338.55
2431046.5	4.57	1.5	17.02	175.40	2.48	14.55	8.60	339.08
2431047.5	4.55	1.5	17.08	175.16	2.65	13.81	8.39	339.61
2431048.5	4.54	-1.5	17.13	174.91	- 2.84	-13.06	- 8.18	340.15
2431049.5	4.53	1.5	17.18	174.65	3.02	12.31	7.97	340.68
2431050.5	4.52	1.5	17.22	174.37	3.21	11.55	7.75	341.21
2431051.5	4.51	1.6	17.26	174.09	3.41	10.78	7.54	341.74
2431052.5	4.50	1.6	17.29	173.81	3.60	10.00	7.33	342.27
2431053.5	4.49	-1.6	17.31	173.51	- 3.80	- 9.22	- 7.12	342.79
2431054.5	4.49	1.6	17.33	173.21	4.01	8.43	6.91	343.32
2431055.5	4.48	1.6	17.34	172.90	4.21	7.64	6.69	343.85
2431056.5	4.48	1.6	17.35	172.59	4.42	6.84	6.48	344.37
2431057.5	4.48	1.6	17.35	172.27	4.62	6.04	6.27	344.89
2431058.5	4.48	-1.6	17.34	171.95	- 4.83	- 5.24	- 6.05	345.42
2431059.5	4.49	1.7	17.33	171.62	5.04	4.44	5.84	345.94
2431060.5	4.49	1.7	17.31	171.30	5.25	3.63	5.63	346.46
2431061.5	4.50	1.7	17.29	170.97	5.46	2.82	5.41	346.98
2431062.5	4.51	1.7	17.26	170.64	5.66	2.02	5.20	347.50
2431063.5	4.52	-1.7	17.22	170.31	- 5.87	- 1.22	- 4.99	348.02
2431064.5	4.53	1.7	17.17	169.98	6.07	- 0.41	4.77	348.54
2431065.5	4.54	1.7	17.12	169.65	6.28	+ 0.39	4.56	349.05
2431066.5	4.56	1.6	17.07	169.33	6.48	1.19	4.35	349.57
2431067.5	4.57	1.6	17.01	169.00	6.67	1.98	4.14	350.09
2431068.5	4.59	-1.6	16.94	168.69	- 6.86	+ 2.77	- 3.92	350.60
2431069.5	4.61	1.6	16.86	168.37	7.05	3.55	3.71	351.11
2431070.5	4.63	1.5	16.79	168.06	7.24	4.33	3.50	351.63
2431071.5	4.66	1.5	16.70	167.76	7.42	5.10	3.28	352.14
2431072.5	4.68	1.5	16.61	167.46	7.60	5.86	3.07	352.65
2431073.5	4.71	-1.5	16.52	167.17	- 7.77	+ 6.62	- 2.86	353.16
2431074.5	4.74	1.4	16.42	166.88	7.93	7.36	2.65	353.67
2431075.5	4.76	1.4	16.32	166.61	8.10	8.10	2.44	354.18
2431076.5	4.80	1.4	16.21	166.34	8.25	8.83	2.22	354.68
2431077.5	4.83	1.4	16.10	166.08	8.40	9.56	2.01	355.19
2431078.5	4.86	-1.3	15.99	165.83	- 8.54	+10.27	- 1.80	355.70
2431079.5	4.90	1.3	15.87	165.58	8.68	10.97	1.59	356.20
2431080.5	4.94	1.3	15.75	165.35	8.81	11.66	1.38	356.71
2431081.5	4.98	1.2	15.63	165.13	8.94	12.33	1.17	357.21
2431082.5	5.02	1.2	15.50	164.92	9.06	13.00	0.96	357.71
2431083.5	5.06	-1.2	15.38	164.72	- 9.17	+13.66	- 0.75	358.21
2431084.5	5.10	1.2	15.25	164.53	9.27	14.30	0.54	358.72
2431085.5	5.15	1.1	15.12	164.36	9.37	14.93	0.33	359.22
2431086.5	5.19	1.1	14.98	164.19	9.46	15.55	- 0.12	359.71
2431087.5	5.24	1.1	14.85	164.04	9.55	16.16	+ 0.09	0.21
2431088.5	5.29	-1.0	14.71	163.90	- 9.62	+16.75	+ 0.30	0.71
2431089.5	5.34	1.0	14.57	163.77	9.69	17.33	0.51	1.21
2431090.5	5.39	1.0	14.44	163.65	9.76	17.90	0.71	1.70
2431091.5	5.44	0.9	14.30	163.55	9.81	18.45	0.92	2.20
2431092.5	5.49	0.9	14.16	163.46	9.86	18.99	1.13	2.69
2431093.5	5.55	-0.9	14.02	163.38	- 9.91	+19.52	+ 1.34	3.19

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2431033.5	0.952	25.38	0.77	265.73	330.14	113.95	114.05	16 49.5	16 49.0
2431034.5	0.954	24.72	0.73	265.59	330.09	104.94	105.04	17 26.4	17 26.0
2431035.5	0.957	24.04	0.70	265.43	330.03	95.94	96.04	18 03.3	18 02.9
2431036.5	0.959	23.34	0.66	265.26	329.96	86.95	87.05	18 40.1	18 39.7
2431037.5	0.961	22.64	0.63	265.07	329.89	77.97	78.08	19 16.9	19 16.5
2431038.5	0.964	21.92	0.59	264.87	329.81	69.01	69.11	19 53.6	19 53.2
2431039.5	0.966	21.18	0.56	264.65	329.73	60.06	60.16	20 30.3	20 29.9
2431040.5	0.969	20.44	0.52	264.42	329.64	51.12	51.22	21 06.9	21 06.5
2431041.5	0.971	19.68	0.49	264.16	329.54	42.19	42.30	21 43.5	21 43.1
2431042.5	0.973	18.91	0.45	263.88	329.44	33.28	33.38	22 20.0	22 19.6
2431043.5	0.975	18.13	0.42	263.58	329.34	24.37	24.48	22 56.5	22 56.1
2431044.5	0.977	17.33	0.38	263.25	329.23	15.48	15.59	23 32.9	23 32.5
2431045.5	0.979	16.53	0.35	262.89	329.11	6.60	6.70	.. .. .	.. .. .
2431046.5	0.981	15.71	0.32	262.51	328.99	357.73	357.83	0 09.3	0 08.9
2431047.5	0.983	14.88	0.29	262.08	328.87	348.87	348.97	0 45.7	0 45.2
2431048.5	0.985	14.05	0.26	261.62	328.74	340.01	340.12	1 22.0	1 21.5
2431049.5	0.987	13.20	0.23	261.10	328.61	331.17	331.28	1 58.2	1 57.8
2431050.5	0.988	12.35	0.20	260.53	328.47	322.34	322.44	2 34.4	2 34.0
2431051.5	0.990	11.49	0.17	259.88	328.34	313.51	313.62	3 10.6	3 10.2
2431052.5	0.991	10.63	0.15	259.15	328.20	304.69	304.80	3 46.8	3 46.3
2431053.5	0.993	9.75	0.13	258.32	328.05	295.88	295.99	4 22.9	4 22.5
2431054.5	0.994	8.88	0.10	257.34	327.91	287.08	287.18	4 59.0	4 58.6
2431055.5	0.995	8.00	0.08	256.18	327.76	278.28	278.38	5 35.1	5 34.6
2431056.5	0.996	7.11	0.07	254.78	327.62	269.48	269.59	6 11.1	6 10.7
2431057.5	0.997	6.23	0.05	253.02	327.47	260.69	260.80	6 47.2	6 46.7
2431058.5	0.998	5.35	0.04	250.74	327.32	251.91	252.01	7 23.2	7 22.8
2431059.5	0.998	4.48	0.03	247.64	327.18	243.12	243.23	7 59.2	7 58.8
2431060.5	0.999	3.63	0.02	243.16	327.03	234.34	234.45	8 35.2	8 34.8
2431061.5	0.999	2.81	0.01	236.11	326.89	225.56	225.67	9 11.2	9 10.8
2431062.5	1.000	2.06	0.01	223.80	326.74	216.78	216.88	9 47.2	9 46.8
2431063.5	1.000	1.50	0.00	200.42	326.60	208.00	208.10	10 23.2	10 22.8
2431064.5	1.000	1.36	0.00	163.86	326.46	199.22	199.32	10 59.2	10 58.8
2431065.5	1.000	1.76	0.00	133.53	326.32	190.43	190.54	11 35.2	11 34.8
2431066.5	1.000	2.43	0.01	117.07	326.18	181.65	181.75	12 11.3	12 10.8
2431067.5	0.999	3.21	0.01	108.11	326.05	172.86	172.96	12 47.3	12 46.9
2431068.5	0.999	4.03	0.02	102.66	325.92	164.06	164.17	13 23.4	13 22.9
2431069.5	0.998	4.87	0.03	99.03	325.79	155.27	155.37	13 59.5	13 59.0
2431070.5	0.998	5.71	0.04	96.43	325.67	146.46	146.57	14 35.6	14 35.1
2431071.5	0.997	6.55	0.05	94.46	325.55	137.65	137.76	15 11.7	15 11.3
2431072.5	0.996	7.39	0.07	92.92	325.44	128.84	128.94	15 47.9	15 47.5
2431073.5	0.995	8.22	0.08	91.66	325.32	120.01	120.12	16 24.1	16 23.7
2431074.5	0.994	9.04	0.10	90.61	325.22	111.18	111.29	17 00.3	16 59.9
2431075.5	0.993	9.86	0.12	89.73	325.11	102.35	102.45	17 36.6	17 36.2
2431076.5	0.991	10.66	0.14	88.96	325.01	93.50	93.60	18 12.9	18 12.5
2431077.5	0.990	11.46	0.16	88.28	324.92	84.64	84.75	18 49.2	18 48.8
2431078.5	0.989	12.25	0.18	87.68	324.83	75.78	75.88	19 25.6	19 25.2
2431079.5	0.987	13.02	0.20	87.14	324.74	66.90	67.01	20 02.1	20 01.6
2431080.5	0.986	13.78	0.23	86.66	324.66	58.02	58.12	20 38.5	20 38.1
2431081.5	0.984	14.53	0.25	86.22	324.58	49.12	49.23	21 15.1	21 14.6
2431082.5	0.982	15.27	0.27	85.82	324.51	40.21	40.32	21 51.6	21 51.2
2431083.5	0.981	15.99	0.30	85.45	324.44	31.29	31.40	22 28.3	22 27.8
2431084.5	0.979	16.70	0.32	85.11	324.37	22.36	22.47	23 04.9	23 04.5
2431085.5	0.977	17.40	0.35	84.80	324.31	13.42	13.53	23 41.7	23 41.2
2431086.5	0.975	18.08	0.37	84.50	324.26	4.47	4.57	.. .. .	.. .. .
2431087.5	0.973	18.75	0.39	84.23	324.21	355.50	355.61	0 18.5	0 18.0
2431088.5	0.972	19.40	0.42	83.99	324.16	346.52	346.63	0 55.3	0 54.9
2431089.5	0.970	20.04	0.44	83.75	324.12	337.53	337.64	1 32.2	1 31.8
2431090.5	0.968	20.67	0.46	83.54	324.08	328.53	328.63	2 09.1	2 08.7
2431091.5	0.966	21.28	0.49	83.34	324.05	319.51	319.62	2 46.1	2 45.7
2431092.5	0.964	21.87	0.51	83.15	324.02	310.48	310.59	3 23.2	3 22.7
2431093.5	0.962	22.45	0.53	82.98	323.99	301.44	301.55	4 00.3	3 59.9

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2431804.5	5.89	-0.7	13.20	216.03	+13.67	-22.49	+ 6.16	14.85
2431805.5	5.85	0.7	13.29	215.91	13.58	21.93	6.36	15.33
2431806.5	5.81	0.7	13.38	215.77	13.48	21.35	6.55	15.81
2431807.5	5.77	0.8	13.47	215.62	13.38	20.77	6.74	16.28
2431808.5	5.74	0.8	13.55	215.46	13.27	20.17	6.94	16.76
2431809.5	5.70	-0.8	13.64	215.28	+13.16	-19.55	+ 7.13	17.23
2431810.5	5.67	0.8	13.72	215.09	13.04	18.92	7.32	17.70
2431811.5	5.64	0.8	13.80	214.89	12.92	18.29	7.51	18.18
2431812.5	5.61	0.9	13.87	214.67	12.79	17.63	7.70	18.65
2431813.5	5.58	0.9	13.95	214.44	12.66	16.97	7.89	19.12
2431814.5	5.55	-0.9	14.02	214.21	+12.53	-16.30	+ 8.07	19.59
2431815.5	5.52	0.9	14.09	213.95	12.39	15.61	8.26	20.06
2431816.5	5.50	0.9	14.15	213.69	12.25	14.91	8.45	20.53
2431817.5	5.47	1.0	14.22	213.42	12.10	14.20	8.63	21.00
2431818.5	5.45	1.0	14.27	213.14	11.96	13.48	8.82	21.47
2431819.5	5.43	-1.0	14.33	212.84	+11.80	-12.75	+ 9.00	21.94
2431820.5	5.41	1.0	14.38	212.54	11.65	12.02	9.19	22.40
2431821.5	5.39	1.0	14.43	212.23	11.49	11.27	9.37	22.87
2431822.5	5.38	1.1	14.47	211.91	11.33	10.51	9.55	23.34
2431823.5	5.36	1.1	14.51	211.58	11.17	9.75	9.73	23.80
2431824.5	5.35	-1.1	14.54	211.24	+11.01	- 8.98	+ 9.91	24.27
2431825.5	5.34	1.1	14.57	210.90	10.84	8.20	10.09	24.73
2431826.5	5.33	1.1	14.59	210.55	10.68	7.42	10.27	25.20
2431827.5	5.32	1.1	14.61	210.20	10.51	6.63	10.45	25.66
2431828.5	5.32	1.1	14.63	209.84	10.34	5.84	10.63	26.12
2431829.5	5.31	-1.2	14.64	209.48	+10.17	- 5.04	+10.80	26.58
2431830.5	5.31	1.2	14.64	209.12	10.00	4.24	10.98	27.05
2431831.5	5.31	1.2	14.64	208.75	9.83	3.44	11.15	27.51
2431832.5	5.32	1.2	14.63	208.38	9.66	2.64	11.33	27.97
2431833.5	5.32	1.2	14.62	208.01	9.50	1.84	11.50	28.43
2431834.5	5.33	-1.2	14.61	207.65	+ 9.33	- 1.03	+11.67	28.89
2431835.5	5.33	1.2	14.58	207.28	9.16	- 0.23	11.85	29.35
2431836.5	5.34	1.2	14.56	206.91	9.00	+ 0.57	12.02	29.81
2431837.5	5.35	1.1	14.53	206.55	8.84	1.37	12.19	30.27
2431838.5	5.37	1.1	14.49	206.19	8.68	2.17	12.36	30.72
2431839.5	5.38	-1.1	14.45	205.83	+ 8.53	+ 2.96	+12.52	31.18
2431840.5	5.40	1.1	14.41	205.48	8.37	3.75	12.69	31.64
2431841.5	5.42	1.1	14.36	205.13	8.22	4.53	12.86	32.09
2431842.5	5.44	1.1	14.30	204.78	8.08	5.31	13.02	32.55
2431843.5	5.46	1.0	14.24	204.45	7.94	6.09	13.19	33.01
2431844.5	5.48	-1.0	14.18	204.12	+ 7.80	+ 6.85	+13.35	33.46
2431845.5	5.51	1.0	14.11	203.79	7.66	7.61	13.52	33.91
2431846.5	5.54	1.0	14.04	203.48	7.53	8.36	13.68	34.37
2431847.5	5.57	0.9	13.97	203.17	7.41	9.11	13.84	34.82
2431848.5	5.60	0.9	13.89	202.87	7.29	9.85	14.00	35.28
2431849.5	5.63	-0.9	13.81	202.58	+ 7.18	+10.57	+14.16	35.73
2431850.5	5.66	0.9	13.73	202.30	7.07	11.29	14.32	36.18
2431851.5	5.70	0.8	13.64	202.03	6.96	12.00	14.47	36.63
2431852.5	5.74	0.8	13.55	201.77	6.86	12.70	14.63	37.09
2431853.5	5.78	0.8	13.46	201.52	6.77	13.39	14.79	37.54
2431854.5	5.82	-0.8	13.37	201.28	+ 6.69	+14.06	+14.94	37.99
2431855.5	5.86	0.7	13.27	201.05	6.60	14.73	15.09	38.44
2431856.5	5.90	0.7	13.17	200.83	6.53	15.39	15.25	38.89
2431857.5	5.95	0.7	13.08	200.63	6.46	16.03	15.40	39.34
2431858.5	5.99	0.7	12.97	200.43	6.40	16.66	15.55	39.79
2431859.5	6.04	-0.6	12.87	200.25	+ 6.34	+17.29	+15.70	40.24
2431860.5	6.09	0.6	12.77	200.08	6.29	17.90	15.85	40.69
2431861.5	6.14	0.6	12.66	199.92	6.25	18.49	15.99	41.13
2431862.5	6.19	0.5	12.56	199.78	6.21	19.08	16.14	41.58
2431863.5	6.25	0.5	12.45	199.65	6.17	19.65	16.29	42.03
2431864.5	6.30	-0.5	12.35	199.52	+ 6.15	+20.22	+16.43	42.48

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2431804.5	0.959	23.37	0.54	279.60	353.08	252.88	252.99	7 19.4	7 19.0
2431805.5	0.961	22.75	0.52	279.33	352.99	243.91	244.02	7 56.2	7 55.8
2431806.5	0.963	22.12	0.49	279.05	352.90	234.95	235.06	8 33.0	8 32.5
2431807.5	0.965	21.48	0.47	278.74	352.80	226.00	226.11	9 09.6	9 09.2
2431808.5	0.967	20.82	0.44	278.41	352.69	217.07	217.18	9 46.3	9 45.8
2431809.5	0.969	20.15	0.42	278.06	352.57	208.14	208.25	10 22.8	10 22.4
2431810.5	0.971	19.47	0.39	277.67	352.44	199.23	199.34	10 59.4	10 58.9
2431811.5	0.973	18.78	0.37	277.26	352.30	190.34	190.45	11 35.8	11 35.4
2431812.5	0.975	18.08	0.34	276.81	352.16	181.45	181.56	12 12.2	12 11.8
2431813.5	0.977	17.36	0.32	276.33	352.00	172.58	172.69	12 48.6	12 48.2
2431814.5	0.979	16.63	0.29	275.80	351.84	163.72	163.82	13 24.9	13 24.5
2431815.5	0.981	15.90	0.27	275.23	351.68	154.86	154.97	14 01.2	14 00.8
2431816.5	0.983	15.15	0.25	274.60	351.50	146.03	146.13	14 37.4	14 37.0
2431817.5	0.984	14.39	0.22	273.92	351.31	137.20	137.31	15 13.6	15 13.1
2431818.5	0.986	13.63	0.20	273.16	351.12	128.38	128.49	15 49.7	15 49.3
2431819.5	0.987	12.85	0.18	272.31	350.93	119.57	119.68	16 25.8	16 25.4
2431820.5	0.989	12.07	0.16	271.37	350.72	110.77	110.88	17 01.9	17 01.4
2431821.5	0.990	11.28	0.14	270.31	350.51	101.98	102.09	17 37.9	17 37.5
2431822.5	0.992	10.49	0.12	269.10	350.29	93.19	93.30	18 13.9	18 13.4
2431823.5	0.993	9.69	0.10	267.71	350.07	84.42	84.53	18 49.9	18 49.4
2431824.5	0.994	8.90	0.09	266.09	349.85	75.65	75.76	19 25.8	19 25.3
2431825.5	0.995	8.10	0.07	264.18	349.62	66.88	66.99	20 01.7	20 01.3
2431826.5	0.996	7.31	0.06	261.88	349.38	58.13	58.23	20 37.6	20 37.1
2431827.5	0.997	6.52	0.05	259.05	349.14	49.37	49.48	21 13.5	21 13.0
2431828.5	0.997	5.75	0.04	255.50	348.90	40.62	40.73	21 49.3	21 48.9
2431829.5	0.998	5.00	0.03	250.92	348.66	31.88	31.99	22 25.2	22 24.7
2431830.5	0.999	4.28	0.02	244.83	348.42	23.13	23.24	23 01.0	23 00.6
2431831.5	0.999	3.63	0.01	236.51	348.17	14.39	14.50	23 36.8	23 36.4
2431832.5	0.999	3.08	0.01	224.99	347.92	5.65	5.76	.. .. .	.. .. .
2431833.5	0.999	2.70	0.01	209.48	347.68	356.91	357.02	0 12.7	0 12.2
2431834.5	1.000	2.56	0.01	190.74	347.43	348.17	348.28	0 48.5	0 48.1
2431835.5	0.999	2.69	0.01	171.98	347.18	339.43	339.53	1 24.3	1 23.9
2431836.5	0.999	3.07	0.01	156.43	346.94	330.68	330.79	2 00.2	1 59.8
2431837.5	0.999	3.61	0.01	144.89	346.70	321.93	322.04	2 36.1	2 35.6
2431838.5	0.999	4.25	0.02	136.54	346.45	313.18	313.29	3 11.9	3 11.5
2431839.5	0.998	4.94	0.03	130.43	346.22	304.43	304.54	3 47.8	3 47.4
2431840.5	0.998	5.68	0.04	125.83	345.98	295.67	295.78	4 23.7	4 23.3
2431841.5	0.997	6.43	0.05	122.26	345.75	286.91	287.02	4 59.7	4 59.2
2431842.5	0.996	7.19	0.06	119.42	345.52	278.14	278.25	5 35.6	5 35.2
2431843.5	0.995	7.96	0.07	117.10	345.30	269.36	269.47	6 11.6	6 11.2
2431844.5	0.994	8.73	0.08	115.17	345.08	260.58	260.69	6 47.6	6 47.2
2431845.5	0.993	9.50	0.10	113.54	344.87	251.79	251.90	7 23.7	7 23.2
2431846.5	0.992	10.26	0.11	112.13	344.66	242.99	243.10	7 59.8	7 59.3
2431847.5	0.991	11.02	0.13	110.90	344.46	234.18	234.29	8 35.9	8 35.5
2431848.5	0.989	11.77	0.15	109.82	344.26	225.37	225.47	9 12.1	9 11.6
2431849.5	0.988	12.51	0.16	108.86	344.07	216.54	216.65	9 48.3	9 47.8
2431850.5	0.987	13.25	0.18	107.99	343.89	207.70	207.81	10 24.5	10 24.1
2431851.5	0.985	13.97	0.20	107.21	343.71	198.86	198.97	11 00.8	11 00.4
2431852.5	0.984	14.69	0.22	106.50	343.54	190.00	190.11	11 37.2	11 36.7
2431853.5	0.982	15.39	0.24	105.86	343.38	181.13	181.24	12 13.6	12 13.1
2431854.5	0.980	16.08	0.26	105.26	343.23	172.26	172.36	12 50.0	12 49.5
2431855.5	0.979	16.76	0.28	104.72	343.08	163.37	163.47	13 26.5	13 26.0
2431856.5	0.977	17.43	0.30	104.21	342.94	154.46	154.57	14 03.0	14 02.6
2431857.5	0.975	18.08	0.32	103.74	342.81	145.55	145.66	14 39.6	14 39.2
2431858.5	0.974	18.73	0.34	103.31	342.69	136.62	136.73	15 16.3	15 15.8
2431859.5	0.972	19.36	0.36	102.90	342.57	127.69	127.79	15 52.9	15 52.5
2431860.5	0.970	19.97	0.38	102.53	342.46	118.74	118.85	16 29.7	16 29.2
2431861.5	0.968	20.58	0.40	102.18	342.37	109.77	109.88	17 06.5	17 06.1
2431862.5	0.966	21.16	0.42	101.85	342.28	100.80	100.91	17 43.4	17 42.9
2431863.5	0.964	21.74	0.44	101.55	342.19	91.81	91.92	18 20.3	18 19.8
2431864.5	0.963	22.30	0.46	101.26	342.12	82.81	82.92	18 57.2	18 56.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2432568.5	6.46	-0.4	12.03	251.28	+21.41	-23.97	+18.73	50.05
2432569.5	6.41	0.4	12.13	251.15	21.36	23.39	18.85	50.49
2432570.5	6.37	0.5	12.22	251.00	21.31	22.79	18.98	50.93
2432571.5	6.32	0.5	12.31	250.83	21.26	22.18	19.10	51.38
2432572.5	6.27	0.5	12.40	250.66	21.21	21.55	19.22	51.82
2432573.5	6.23	-0.5	12.49	250.47	+21.15	-20.91	+19.34	52.26
2432574.5	6.19	0.6	12.57	250.26	21.10	20.26	19.46	52.70
2432575.5	6.14	0.6	12.66	250.04	21.04	19.59	19.58	53.14
2432576.5	6.10	0.6	12.74	249.81	20.98	18.90	19.70	53.58
2432577.5	6.07	0.6	12.82	249.57	20.92	18.21	19.81	54.02
2432578.5	6.03	-0.7	12.90	249.31	+20.86	-17.50	+19.93	54.46
2432579.5	5.99	0.7	12.98	249.04	20.80	16.77	20.04	54.90
2432580.5	5.96	0.7	13.05	248.75	20.73	16.04	20.15	55.34
2432581.5	5.93	0.7	13.13	248.46	20.67	15.29	20.27	55.78
2432582.5	5.89	0.7	13.20	248.15	20.60	14.53	20.37	56.22
2432583.5	5.87	-0.8	13.26	247.83	+20.53	-13.76	+20.48	56.66
2432584.5	5.84	0.8	13.33	247.51	20.47	12.97	20.59	57.10
2432585.5	5.81	0.8	13.39	247.17	20.40	12.18	20.70	57.54
2432586.5	5.79	0.8	13.44	246.82	20.33	11.37	20.80	57.98
2432587.5	5.76	0.8	13.50	246.46	20.26	10.56	20.90	58.42
2432588.5	5.74	-0.9	13.55	246.09	+20.19	- 9.74	+21.01	58.85
2432589.5	5.72	0.9	13.59	245.72	20.11	8.90	21.11	59.29
2432590.5	5.70	0.9	13.63	245.33	20.04	8.06	21.21	59.73
2432591.5	5.69	0.9	13.67	244.94	19.97	7.22	21.31	60.17
2432592.5	5.67	0.9	13.71	244.55	19.89	6.36	21.40	60.61
2432593.5	5.66	-0.9	13.73	244.15	+19.82	- 5.50	+21.50	61.05
2432594.5	5.65	1.0	13.76	243.74	19.75	4.64	21.59	61.48
2432595.5	5.64	1.0	13.78	243.34	19.67	3.77	21.69	61.92
2432596.5	5.64	1.0	13.79	242.92	19.60	2.90	21.78	62.36
2432597.5	5.63	1.0	13.81	242.51	19.53	2.02	21.87	62.80
2432598.5	5.63	-1.0	13.81	242.10	+19.45	- 1.15	+21.96	63.23
2432599.5	5.63	1.0	13.81	241.68	19.38	- 0.27	22.05	63.67
2432600.5	5.63	1.0	13.81	241.27	19.31	+ 0.60	22.14	64.11
2432601.5	5.63	1.0	13.80	240.85	19.24	1.48	22.22	64.54
2432602.5	5.64	1.0	13.79	240.44	19.17	2.36	22.31	64.98
2432603.5	5.65	-1.0	13.77	240.04	+19.10	+ 3.23	+22.39	65.42
2432604.5	5.65	1.0	13.75	239.63	19.03	4.10	22.47	65.85
2432605.5	5.67	0.9	13.73	239.23	18.97	4.96	22.55	66.29
2432606.5	5.68	0.9	13.70	238.83	18.90	5.82	22.63	66.73
2432607.5	5.69	0.9	13.66	238.44	18.84	6.68	22.71	67.17
2432608.5	5.71	-0.9	13.62	238.06	+18.78	+ 7.53	+22.78	67.60
2432609.5	5.73	0.9	13.58	237.68	18.72	8.38	22.86	68.04
2432610.5	5.75	0.9	13.54	237.31	18.66	9.21	22.93	68.47
2432611.5	5.77	0.8	13.49	236.95	18.61	10.04	23.01	68.91
2432612.5	5.79	0.8	13.43	236.59	18.55	10.87	23.08	69.35
2432613.5	5.81	-0.8	13.37	236.25	+18.50	+11.68	+23.15	69.78
2432614.5	5.84	0.8	13.31	235.91	18.46	12.49	23.21	70.22
2432615.5	5.87	0.8	13.25	235.58	18.41	13.28	23.28	70.66
2432616.5	5.90	0.7	13.18	235.27	18.37	14.07	23.34	71.09
2432617.5	5.93	0.7	13.11	234.96	18.33	14.84	23.41	71.53
2432618.5	5.96	-0.7	13.04	234.67	+18.30	+15.61	+23.47	71.97
2432619.5	6.00	0.7	12.97	234.39	18.26	16.36	23.53	72.40
2432620.5	6.03	0.6	12.89	234.12	18.23	17.10	23.59	72.84
2432621.5	6.07	0.6	12.81	233.86	18.21	17.83	23.65	73.28
2432622.5	6.11	0.6	12.73	233.62	18.19	18.55	23.71	73.71
2432623.5	6.15	-0.6	12.65	233.38	+18.17	+19.25	+23.76	74.15
2432624.5	6.19	0.5	12.56	233.16	18.15	19.95	23.82	74.59
2432625.5	6.23	0.5	12.48	232.95	18.14	20.63	23.87	75.02
2432626.5	6.28	0.5	12.39	232.76	18.13	21.30	23.92	75.46
2432627.5	6.32	0.5	12.30	232.58	18.12	21.95	23.97	75.90
2432628.5	6.37	-0.4	12.21	232.41	+18.12	+22.60	+24.02	76.33

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2432568.5	0.961	22.65	0.46	287.42	14.88	98.96	99.07	17 50.8	17 50.4
2432569.5	0.963	22.08	0.44	287.17	14.81	89.99	90.11	18 27.5	18 27.1
2432570.5	0.965	21.50	0.43	286.90	14.73	81.05	81.16	19 04.2	19 03.7
2432571.5	0.967	20.91	0.41	286.62	14.64	72.11	72.23	19 40.8	19 40.3
2432572.5	0.969	20.30	0.39	286.32	14.54	63.20	63.31	20 17.3	20 16.9
2432573.5	0.971	19.69	0.36	285.99	14.43	54.29	54.40	20 53.8	20 53.4
2432574.5	0.973	19.06	0.34	285.64	14.32	45.40	45.51	21 30.2	21 29.8
2432575.5	0.974	18.41	0.32	285.27	14.20	36.52	36.63	22 06.6	22 06.1
2432576.5	0.976	17.76	0.30	284.86	14.07	27.65	27.76	22 42.9	22 42.5
2432577.5	0.978	17.10	0.28	284.42	13.93	18.80	18.91	23 19.2	23 18.7
2432578.5	0.980	16.42	0.26	283.94	13.79	9.96	10.07	23 55.4	23 54.9
2432579.5	0.981	15.73	0.24	283.42	13.64	1.13	1.24	.. .. .	.. .. .
2432580.5	0.983	15.03	0.22	282.85	13.48	352.31	352.42	0 31.5	0 31.1
2432581.5	0.984	14.33	0.20	282.23	13.31	343.50	343.62	1 07.6	1 07.2
2432582.5	0.986	13.61	0.19	281.53	13.14	334.71	334.82	1 43.7	1 43.2
2432583.5	0.987	12.88	0.17	280.77	12.95	325.93	326.04	2 19.7	2 19.2
2432584.5	0.989	12.15	0.15	279.91	12.77	317.16	317.27	2 55.7	2 55.2
2432585.5	0.990	11.41	0.13	278.94	12.57	308.39	308.51	3 31.6	3 31.1
2432586.5	0.991	10.66	0.12	277.84	12.37	299.64	299.75	4 07.4	4 07.0
2432587.5	0.993	9.90	0.10	276.57	12.17	290.90	291.01	4 43.3	4 42.8
2432588.5	0.994	9.15	0.09	275.11	11.95	282.16	282.27	5 19.1	5 18.6
2432589.5	0.995	8.39	0.07	273.38	11.74	273.43	273.55	5 54.9	5 54.4
2432590.5	0.996	7.64	0.06	271.32	11.51	264.71	264.83	6 30.6	6 30.1
2432591.5	0.996	6.88	0.05	268.82	11.29	256.00	256.11	7 06.3	7 05.9
2432592.5	0.997	6.14	0.04	265.73	11.06	247.29	247.40	7 42.0	7 41.6
2432593.5	0.998	5.42	0.03	261.81	10.82	238.58	238.70	8 17.7	8 17.2
2432594.5	0.998	4.72	0.02	256.73	10.58	229.88	229.99	8 53.4	8 52.9
2432595.5	0.999	4.06	0.02	249.96	10.34	221.18	221.30	9 29.0	9 28.5
2432596.5	0.999	3.48	0.01	240.81	10.10	212.49	212.60	10 04.6	10 04.2
2432597.5	0.999	3.01	0.01	228.45	9.85	203.79	203.91	10 40.3	10 39.8
2432598.5	0.999	2.73	0.01	212.62	9.61	195.10	195.21	11 15.9	11 15.5
2432599.5	0.999	2.68	0.01	194.78	9.36	186.41	186.52	11 51.6	11 51.1
2432600.5	0.999	2.88	0.01	177.92	9.11	177.71	177.83	12 27.2	12 26.7
2432601.5	0.999	3.29	0.01	164.24	8.86	169.02	169.13	13 02.8	13 02.4
2432602.5	0.999	3.83	0.02	153.97	8.61	160.32	160.43	13 38.5	13 38.0
2432603.5	0.998	4.46	0.02	146.40	8.37	151.62	151.73	14 14.2	14 13.7
2432604.5	0.998	5.15	0.03	140.75	8.12	142.91	143.03	14 49.9	14 49.4
2432605.5	0.997	5.86	0.04	136.43	7.88	134.21	134.32	15 25.6	15 25.1
2432606.5	0.997	6.60	0.05	133.05	7.64	125.49	125.60	16 01.3	16 00.9
2432607.5	0.996	7.34	0.06	130.33	7.40	116.77	116.88	16 37.1	16 36.6
2432608.5	0.995	8.10	0.07	128.10	7.16	108.04	108.16	17 12.9	17 12.4
2432609.5	0.994	8.85	0.08	126.25	6.93	99.31	99.42	17 48.7	17 48.3
2432610.5	0.993	9.61	0.09	124.67	6.70	90.57	90.68	18 24.6	18 24.1
2432611.5	0.992	10.36	0.11	123.31	6.48	81.82	81.93	19 00.5	19 00.0
2432612.5	0.991	11.11	0.13	122.12	6.26	73.06	73.17	19 36.4	19 36.0
2432613.5	0.989	11.86	0.14	121.08	6.05	64.29	64.40	20 12.4	20 12.0
2432614.5	0.988	12.59	0.16	120.16	5.84	55.51	55.62	20 48.4	20 48.0
2432615.5	0.987	13.32	0.18	119.33	5.64	46.72	46.83	21 24.5	21 24.1
2432616.5	0.985	14.04	0.20	118.58	5.44	37.92	38.03	22 00.6	22 00.2
2432617.5	0.984	14.76	0.22	117.90	5.25	29.11	29.22	22 36.8	22 36.4
2432618.5	0.982	15.46	0.24	117.29	5.07	20.29	20.40	23 13.0	23 12.6
2432619.5	0.980	16.15	0.26	116.72	4.89	11.45	11.57	23 49.3	23 48.9
2432620.5	0.979	16.83	0.28	116.20	4.72	2.61	2.72	.. .. .	.. .. .
2432621.5	0.977	17.50	0.30	115.72	4.56	353.75	353.86	0 25.6	0 25.2
2432622.5	0.975	18.16	0.32	115.27	4.41	344.87	344.99	1 02.0	1 01.6
2432623.5	0.973	18.81	0.34	114.86	4.26	335.99	336.10	1 38.5	1 38.0
2432624.5	0.971	19.44	0.36	114.48	4.12	327.09	327.20	2 15.0	2 14.5
2432625.5	0.970	20.07	0.38	114.12	3.99	318.18	318.29	2 51.5	2 51.1
2432626.5	0.968	20.68	0.40	113.78	3.87	309.26	309.37	3 28.1	3 27.7
2432627.5	0.966	21.28	0.42	113.47	3.75	300.32	300.43	4 04.8	4 04.4
2432628.5	0.964	21.86	0.44	113.18	3.65	291.36	291.48	4 41.6	4 41.1

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2433333.5	6.41	-0.4	12.14	287.27	+21.44	-23.63	+24.63	84.22
2433334.5	6.35	0.5	12.25	287.14	21.44	23.02	24.65	84.66
2433335.5	6.30	0.5	12.35	287.00	21.45	22.39	24.67	85.10
2433336.5	6.25	0.5	12.45	286.85	21.46	21.75	24.68	85.54
2433337.5	6.20	0.5	12.55	286.68	21.47	21.10	24.70	85.98
2433338.5	6.15	-0.6	12.65	286.49	+21.48	-20.43	+24.71	86.42
2433339.5	6.10	0.6	12.75	286.30	21.50	19.75	24.72	86.86
2433340.5	6.05	0.6	12.85	286.09	21.52	19.06	24.73	87.30
2433341.5	6.01	0.7	12.95	285.86	21.54	18.35	24.74	87.74
2433342.5	5.96	0.7	13.04	285.63	21.56	17.63	24.75	88.18
2433343.5	5.92	-0.7	13.13	285.38	+21.59	-16.90	+24.76	88.62
2433344.5	5.88	0.7	13.23	285.12	21.62	16.15	24.76	89.06
2433345.5	5.84	0.8	13.32	284.84	21.65	15.39	24.76	89.51
2433346.5	5.80	0.8	13.40	284.56	21.68	14.62	24.76	89.95
2433347.5	5.77	0.8	13.49	284.26	21.71	13.83	24.76	90.39
2433348.5	5.73	-0.8	13.57	283.95	+21.75	-13.04	+24.76	90.83
2433349.5	5.70	0.9	13.65	283.63	21.79	12.23	24.76	91.27
2433350.5	5.67	0.9	13.72	283.30	21.82	11.41	24.75	91.72
2433351.5	5.64	0.9	13.80	282.96	21.87	10.58	24.74	92.16
2433352.5	5.61	0.9	13.87	282.61	21.91	9.74	24.74	92.60
2433353.5	5.58	-0.9	13.93	282.25	+21.95	- 8.90	+24.73	93.04
2433354.5	5.56	1.0	13.99	281.88	22.00	8.04	24.71	93.49
2433355.5	5.54	1.0	14.05	281.50	22.04	7.17	24.70	93.93
2433356.5	5.51	1.0	14.11	281.12	22.09	6.30	24.69	94.38
2433357.5	5.50	1.0	14.16	280.72	22.14	5.42	24.67	94.82
2433358.5	5.48	-1.0	14.20	280.33	+22.19	- 4.53	+24.65	95.26
2433359.5	5.46	1.1	14.24	279.92	22.24	3.64	24.63	95.71
2433360.5	5.45	1.1	14.28	279.51	22.29	2.74	24.61	96.15
2433361.5	5.43	1.1	14.31	279.10	22.34	1.84	24.59	96.60
2433362.5	5.42	1.1	14.34	278.69	22.40	0.94	24.56	97.05
2433363.5	5.41	-1.1	14.36	278.27	+22.45	- 0.03	+24.54	97.49
2433364.5	5.41	1.1	14.38	277.85	22.50	+ 0.88	24.51	97.94
2433365.5	5.40	1.1	14.39	277.43	22.56	1.79	24.48	98.38
2433366.5	5.40	1.1	14.40	277.01	22.61	2.70	24.45	98.83
2433367.5	5.40	1.1	14.41	276.60	22.66	3.60	24.42	99.28
2433368.5	5.40	-1.1	14.40	276.18	+22.72	+ 4.51	+24.38	99.73
2433369.5	5.40	1.1	14.40	275.77	22.77	5.41	24.35	100.17
2433370.5	5.40	1.1	14.39	275.36	22.82	6.31	24.31	100.62
2433371.5	5.41	1.1	14.37	274.95	22.88	7.21	24.27	101.07
2433372.5	5.42	1.0	14.35	274.55	22.93	8.10	24.23	101.52
2433373.5	5.43	-1.0	14.33	274.15	+22.98	+ 8.99	+24.19	101.97
2433374.5	5.44	1.0	14.30	273.76	23.03	9.87	24.15	102.42
2433375.5	5.45	1.0	14.27	273.38	23.09	10.74	24.10	102.87
2433376.5	5.46	1.0	14.23	273.01	23.14	11.61	24.05	103.32
2433377.5	5.48	1.0	14.19	272.64	23.19	12.46	24.01	103.77
2433378.5	5.50	-0.9	14.14	272.28	+23.24	+13.31	+23.96	104.22
2433379.5	5.52	0.9	14.10	271.93	23.29	14.15	23.90	104.67
2433380.5	5.54	0.9	14.04	271.59	23.34	14.98	23.85	105.13
2433381.5	5.56	0.9	13.99	271.27	23.39	15.80	23.80	105.58
2433382.5	5.58	0.9	13.93	270.95	23.44	16.61	23.74	106.03
2433383.5	5.61	-0.9	13.87	270.64	+23.49	+17.41	+23.68	106.48
2433384.5	5.63	0.8	13.80	270.35	23.54	18.19	23.62	106.94
2433385.5	5.66	0.8	13.73	270.07	23.58	18.97	23.56	107.39
2433386.5	5.69	0.8	13.66	269.80	23.63	19.73	23.50	107.85
2433387.5	5.72	0.8	13.59	269.54	23.68	20.47	23.43	108.30
2433388.5	5.76	-0.7	13.51	269.30	+23.72	+21.21	+23.37	108.76
2433389.5	5.79	0.7	13.44	269.07	23.77	21.93	23.30	109.21
2433390.5	5.82	0.7	13.36	268.85	23.82	22.64	23.23	109.67
2433391.5	5.86	0.7	13.27	268.65	23.86	23.33	23.16	110.13
2433392.5	5.90	0.7	13.19	268.46	23.91	24.01	23.09	110.58
2433393.5	5.93	-0.6	13.11	268.29	+23.95	+24.67	+23.01	111.04

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2433333.5	0.964	21.95	0.44	288.72	31.63	295.33	295.45	4 25.3	4 24.8
2433334.5	0.966	21.40	0.42	288.53	31.58	286.36	286.48	5 02.1	5 01.6
2433335.5	0.967	20.83	0.40	288.34	31.53	277.41	277.53	5 38.8	5 38.3
2433336.5	0.969	20.25	0.38	288.13	31.48	268.47	268.59	6 15.4	6 14.9
2433337.5	0.971	19.66	0.37	287.90	31.42	259.54	259.66	6 52.0	6 51.5
2433338.5	0.973	19.05	0.35	287.66	31.35	250.63	250.75	7 28.6	7 28.1
2433339.5	0.974	18.43	0.33	287.41	31.28	241.73	241.85	8 05.0	8 04.6
2433340.5	0.976	17.80	0.31	287.13	31.21	232.84	232.96	8 41.5	8 41.0
2433341.5	0.978	17.16	0.29	286.84	31.13	223.97	224.09	9 17.9	9 17.4
2433342.5	0.979	16.51	0.27	286.51	31.04	215.11	215.23	9 54.2	9 53.7
2433343.5	0.981	15.84	0.25	286.16	30.95	206.26	206.38	10 30.4	10 30.0
2433344.5	0.983	15.16	0.23	285.78	30.85	197.42	197.54	11 06.7	11 06.2
2433345.5	0.984	14.47	0.21	285.36	30.75	188.60	188.72	11 42.8	11 42.3
2433346.5	0.986	13.78	0.19	284.89	30.65	179.79	179.90	12 18.9	12 18.4
2433347.5	0.987	13.07	0.17	284.36	30.54	170.98	171.10	12 55.0	12 54.5
2433348.5	0.988	12.35	0.16	283.78	30.42	162.19	162.31	13 31.0	13 30.5
2433349.5	0.990	11.62	0.14	283.12	30.30	153.41	153.53	14 07.0	14 06.5
2433350.5	0.991	10.88	0.12	282.36	30.17	144.64	144.76	14 42.9	14 42.4
2433351.5	0.992	10.13	0.11	281.50	30.04	135.88	136.00	15 18.8	15 18.3
2433352.5	0.993	9.38	0.09	280.48	29.91	127.13	127.25	15 54.6	15 54.2
2433353.5	0.994	8.62	0.08	279.29	29.77	118.39	118.51	16 30.5	16 30.0
2433354.5	0.995	7.86	0.07	277.86	29.63	109.66	109.78	17 06.2	17 05.7
2433355.5	0.996	7.10	0.05	276.11	29.48	100.94	101.05	17 42.0	17 41.5
2433356.5	0.997	6.34	0.04	273.94	29.33	92.22	92.34	18 17.7	18 17.2
2433357.5	0.998	5.58	0.03	271.17	29.17	83.51	83.62	18 53.4	18 52.9
2433358.5	0.998	4.83	0.03	267.52	29.01	74.80	74.92	19 29.0	19 28.6
2433359.5	0.999	4.11	0.02	262.55	28.85	66.10	66.22	20 04.7	20 04.2
2433360.5	0.999	3.42	0.01	255.50	28.68	57.40	57.52	20 40.3	20 39.9
2433361.5	0.999	2.81	0.01	245.14	28.51	48.71	48.83	21 16.0	21 15.5
2433362.5	1.000	2.33	0.01	229.82	28.34	40.02	40.14	21 51.6	21 51.1
2433363.5	1.000	2.09	0.00	208.95	28.17	31.33	31.45	22 27.2	22 26.7
2433364.5	1.000	2.16	0.01	186.34	27.99	22.64	22.76	23 02.8	23 02.3
2433365.5	1.000	2.53	0.01	167.77	27.82	13.96	14.07	23 38.4	23 37.9
2433366.5	0.999	3.08	0.01	154.85	27.64	5.27	5.39	.. .. .	.. .. .
2433367.5	0.999	3.74	0.02	146.14	27.46	356.58	356.70	0 14.0	0 13.5
2433368.5	0.998	4.46	0.02	140.13	27.28	347.89	348.00	0 49.7	0 49.2
2433369.5	0.998	5.21	0.03	135.81	27.10	339.19	339.31	1 25.3	1 24.8
2433370.5	0.997	5.97	0.04	132.59	26.92	330.49	330.61	2 01.0	2 00.5
2433371.5	0.997	6.75	0.05	130.10	26.74	321.79	321.91	2 36.6	2 36.1
2433372.5	0.996	7.54	0.06	128.12	26.57	313.08	313.20	3 12.3	3 11.8
2433373.5	0.995	8.32	0.08	126.52	26.39	304.37	304.48	3 48.1	3 47.6
2433374.5	0.994	9.11	0.09	125.19	26.22	295.64	295.76	4 23.8	4 23.3
2433375.5	0.993	9.89	0.11	124.07	26.04	286.92	287.03	4 59.6	4 59.1
2433376.5	0.991	10.67	0.12	123.11	25.88	278.18	278.30	5 35.4	5 34.9
2433377.5	0.990	11.45	0.14	122.29	25.71	269.43	269.55	6 11.3	6 10.8
2433378.5	0.989	12.22	0.16	121.56	25.55	260.68	260.80	6 47.2	6 46.7
2433379.5	0.987	12.98	0.18	120.93	25.38	251.92	252.03	7 23.1	7 22.7
2433380.5	0.986	13.73	0.20	120.36	25.23	243.14	243.26	7 59.1	7 58.6
2433381.5	0.984	14.48	0.22	119.85	25.08	234.36	234.47	8 35.2	8 34.7
2433382.5	0.982	15.22	0.24	119.40	24.93	225.56	225.68	9 11.2	9 10.8
2433383.5	0.981	15.95	0.27	118.98	24.78	216.75	216.87	9 47.4	9 46.9
2433384.5	0.979	16.66	0.29	118.61	24.65	207.93	208.05	10 23.6	10 23.1
2433385.5	0.977	17.37	0.31	118.26	24.51	199.10	199.22	10 59.8	10 59.3
2433386.5	0.975	18.07	0.34	117.95	24.38	190.25	190.37	11 36.1	11 35.6
2433387.5	0.973	18.75	0.36	117.65	24.26	181.40	181.51	12 12.5	12 12.0
2433388.5	0.972	19.43	0.38	117.38	24.15	172.52	172.64	12 48.9	12 48.4
2433389.5	0.970	20.09	0.41	117.13	24.04	163.64	163.75	13 25.4	13 24.9
2433390.5	0.968	20.74	0.43	116.90	23.93	154.74	154.85	14 01.9	14 01.4
2433391.5	0.966	21.38	0.46	116.69	23.83	145.82	145.94	14 38.5	14 38.0
2433392.5	0.964	22.01	0.48	116.48	23.74	136.89	137.01	15 15.2	15 14.7
2433393.5	0.962	22.62	0.50	116.30	23.66	127.95	128.07	15 51.9	15 51.4

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2434103.5	5.73	-0.8	13.58	325.71	+12.81	-21.46	+20.87	121.73
2434104.5	5.68	0.8	13.70	325.63	12.86	20.89	20.76	122.20
2434105.5	5.62	0.8	13.83	325.54	12.91	20.31	20.65	122.67
2434106.5	5.57	0.8	13.96	325.44	12.98	19.72	20.53	123.14
2434107.5	5.52	0.9	14.09	325.33	13.04	19.12	20.41	123.62
2434108.5	5.47	-0.9	14.22	325.21	+13.11	-18.51	+20.30	124.09
2434109.5	5.42	0.9	14.35	325.07	13.19	17.88	20.18	124.56
2434110.5	5.37	1.0	14.47	324.92	13.27	17.25	20.06	125.04
2434111.5	5.33	1.0	14.60	324.76	13.36	16.60	19.93	125.51
2434112.5	5.28	1.0	14.72	324.59	13.45	15.94	19.81	125.99
2434113.5	5.24	-1.1	14.84	324.41	+13.55	-15.27	+19.69	126.47
2434114.5	5.20	1.1	14.96	324.21	13.66	14.59	19.56	126.94
2434115.5	5.16	1.1	15.08	324.01	13.77	13.89	19.43	127.42
2434116.5	5.12	1.1	15.19	323.79	13.88	13.19	19.30	127.90
2434117.5	5.08	1.2	15.31	323.57	14.00	12.47	19.17	128.38
2434118.5	5.04	-1.2	15.42	323.33	+14.12	-11.75	+19.04	128.86
2434119.5	5.01	1.2	15.52	323.08	14.25	11.01	18.90	129.34
2434120.5	4.98	1.3	15.63	322.82	14.38	10.27	18.77	129.82
2434121.5	4.94	1.3	15.73	322.55	14.52	9.51	18.63	130.30
2434122.5	4.91	1.3	15.83	322.28	14.66	8.75	18.49	130.78
2434123.5	4.89	-1.3	15.92	321.99	+14.80	- 7.97	+18.35	131.27
2434124.5	4.86	1.4	16.01	321.70	14.95	7.19	18.21	131.75
2434125.5	4.83	1.4	16.10	321.40	15.10	6.40	18.07	132.23
2434126.5	4.81	1.4	16.18	321.09	15.25	5.61	17.92	132.72
2434127.5	4.79	1.4	16.25	320.77	15.41	4.80	17.78	133.21
2434128.5	4.76	-1.5	16.32	320.45	+15.57	- 3.99	+17.63	133.69
2434129.5	4.74	1.5	16.39	320.12	15.73	3.18	17.48	134.18
2434130.5	4.73	1.5	16.45	319.79	15.89	2.36	17.33	134.67
2434131.5	4.71	1.5	16.51	319.45	16.06	1.53	17.18	135.16
2434132.5	4.70	1.5	16.56	319.11	16.22	- 0.71	17.03	135.65
2434133.5	4.68	-1.6	16.61	318.76	+16.39	+ 0.12	+16.87	136.14
2434134.5	4.67	1.6	16.65	318.42	16.56	0.96	16.72	136.63
2434135.5	4.66	1.5	16.68	318.07	16.72	1.79	16.56	137.12
2434136.5	4.66	1.5	16.71	317.72	16.89	2.62	16.40	137.61
2434137.5	4.65	1.5	16.73	317.38	17.06	3.46	16.24	138.10
2434138.5	4.64	-1.5	16.75	317.03	+17.22	+ 4.29	+16.08	138.60
2434139.5	4.64	1.5	16.76	316.68	17.39	5.12	15.92	139.09
2434140.5	4.64	1.5	16.77	316.34	17.55	5.95	15.76	139.59
2434141.5	4.64	1.5	16.77	316.00	17.71	6.78	15.59	140.08
2434142.5	4.64	1.5	16.76	315.66	17.87	7.60	15.42	140.58
2434143.5	4.64	-1.5	16.75	315.33	+18.03	+ 8.42	+15.26	141.08
2434144.5	4.65	1.5	16.73	315.00	18.19	9.24	15.09	141.58
2434145.5	4.65	1.4	16.71	314.68	18.34	10.04	14.92	142.08
2434146.5	4.66	1.4	16.69	314.36	18.49	10.85	14.75	142.58
2434147.5	4.67	1.4	16.65	314.05	18.64	11.64	14.57	143.08
2434148.5	4.68	-1.4	16.62	313.75	+18.78	+12.43	+14.40	143.58
2434149.5	4.69	1.4	16.58	313.45	18.93	13.21	14.22	144.08
2434150.5	4.71	1.4	16.53	313.17	19.06	13.99	14.05	144.59
2434151.5	4.72	1.4	16.48	312.89	19.20	14.75	13.87	145.09
2434152.5	4.73	1.3	16.42	312.62	19.33	15.50	13.69	145.59
2434153.5	4.75	-1.3	16.36	312.36	+19.45	+16.25	+13.51	146.10
2434154.5	4.77	1.3	16.30	312.12	19.58	16.98	13.33	146.61
2434155.5	4.79	1.3	16.23	311.88	19.69	17.70	13.15	147.11
2434156.5	4.81	1.3	16.16	311.66	19.81	18.41	12.96	147.62
2434157.5	4.83	1.2	16.09	311.45	19.92	19.11	12.78	148.13
2434158.5	4.86	-1.2	16.01	311.25	+20.02	+19.80	+12.59	148.64
2434159.5	4.88	1.2	15.93	311.06	20.12	20.47	12.40	149.15
2434160.5	4.91	1.2	15.85	310.88	20.21	21.13	12.21	149.66
2434161.5	4.93	1.2	15.76	310.72	20.30	21.78	12.02	150.18
2434162.5	4.96	1.1	15.68	310.57	20.39	22.41	11.83	150.69
2434163.5	4.99	-1.1	15.59	310.44	+20.47	+23.04	+11.64	151.20

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2434103.5	0.963	22.03	0.50	283.75	38.09	83.87	83.99	18 52.9	18 52.4
2434104.5	0.965	21.47	0.48	283.72	38.10	74.85	74.97	19 29.9	19 29.4
2434105.5	0.967	20.90	0.46	283.68	38.11	65.84	65.97	20 06.8	20 06.3
2434106.5	0.969	20.32	0.43	283.64	38.12	56.85	56.97	20 43.6	20 43.1
2434107.5	0.971	19.72	0.41	283.61	38.13	47.87	47.99	21 20.4	21 19.9
2434108.5	0.972	19.11	0.39	283.58	38.14	38.89	39.02	21 57.2	21 56.7
2434109.5	0.974	18.48	0.37	283.54	38.15	29.93	30.06	22 33.9	22 33.4
2434110.5	0.976	17.84	0.35	283.51	38.16	20.99	21.11	23 10.6	23 10.1
2434111.5	0.978	17.19	0.33	283.47	38.17	12.05	12.17	23 47.2	23 46.7
2434112.5	0.979	16.53	0.30	283.43	38.19	3.12	3.25	.. .. .	.. .. .
2434113.5	0.981	15.85	0.28	283.39	38.20	354.21	354.33	0 23.8	0 23.3
2434114.5	0.983	15.16	0.26	283.34	38.21	345.30	345.43	1 00.3	0 59.8
2434115.5	0.984	14.46	0.24	283.29	38.22	336.41	336.53	1 36.7	1 36.2
2434116.5	0.986	13.74	0.22	283.23	38.24	327.53	327.65	2 13.2	2 12.7
2434117.5	0.987	13.02	0.20	283.16	38.25	318.66	318.78	2 49.5	2 49.0
2434118.5	0.989	12.28	0.18	283.07	38.26	309.80	309.92	3 25.9	3 25.4
2434119.5	0.990	11.53	0.16	282.97	38.27	300.94	301.07	4 02.2	4 01.7
2434120.5	0.991	10.77	0.14	282.85	38.29	292.10	292.22	4 38.4	4 37.9
2434121.5	0.992	10.00	0.12	282.71	38.30	283.27	283.39	5 14.6	5 14.1
2434122.5	0.994	9.21	0.10	282.52	38.31	274.45	274.57	5 50.8	5 50.3
2434123.5	0.995	8.42	0.09	282.30	38.32	265.63	265.75	6 26.9	6 26.4
2434124.5	0.996	7.62	0.07	282.01	38.32	256.82	256.95	7 03.0	7 02.5
2434125.5	0.996	6.81	0.06	281.63	38.33	248.02	248.15	7 39.1	7 38.6
2434126.5	0.997	6.00	0.04	281.14	38.34	239.23	239.35	8 15.2	8 14.7
2434127.5	0.998	5.17	0.03	280.46	38.34	230.45	230.57	8 51.2	8 50.7
2434128.5	0.999	4.34	0.02	279.48	38.35	221.66	221.79	9 27.2	9 26.7
2434129.5	0.999	3.51	0.02	278.00	38.35	212.89	213.01	10 03.1	10 02.6
2434130.5	0.999	2.68	0.01	275.53	38.35	204.12	204.24	10 39.1	10 38.6
2434131.5	1.000	1.85	0.00	270.75	38.35	195.35	195.47	11 15.0	11 14.5
2434132.5	1.000	1.05	0.00	258.30	38.35	186.59	186.71	11 50.9	11 50.4
2434133.5	1.000	0.50	0.00	204.46	38.34	177.83	177.95	12 26.9	12 26.4
2434134.5	1.000	0.93	0.00	138.42	38.34	169.07	169.19	13 02.8	13 02.3
2434135.5	1.000	1.72	0.00	123.15	38.33	160.31	160.43	13 38.7	13 38.2
2434136.5	1.000	2.56	0.01	117.70	38.32	151.55	151.67	14 14.6	14 14.1
2434137.5	0.999	3.41	0.01	114.99	38.31	142.79	142.91	14 50.5	14 50.0
2434138.5	0.999	4.27	0.02	113.41	38.30	134.03	134.16	15 26.4	15 25.9
2434139.5	0.998	5.12	0.03	112.37	38.28	125.27	125.39	16 02.3	16 01.8
2434140.5	0.997	5.98	0.05	111.66	38.27	116.51	116.63	16 38.3	16 37.8
2434141.5	0.996	6.83	0.06	111.15	38.25	107.74	107.86	17 14.2	17 13.7
2434142.5	0.996	7.68	0.08	110.77	38.24	98.97	99.09	17 50.2	17 49.7
2434143.5	0.994	8.53	0.09	110.48	38.22	90.19	90.32	18 26.2	18 25.7
2434144.5	0.993	9.38	0.11	110.26	38.20	81.41	81.53	19 02.2	19 01.7
2434145.5	0.992	10.21	0.13	110.08	38.18	72.63	72.75	19 38.3	19 37.8
2434146.5	0.991	11.05	0.15	109.95	38.15	63.83	63.96	20 14.4	20 13.9
2434147.5	0.989	11.87	0.18	109.85	38.13	55.03	55.15	20 50.5	20 50.0
2434148.5	0.988	12.69	0.20	109.76	38.11	46.23	46.35	21 26.6	21 26.1
2434149.5	0.986	13.50	0.23	109.70	38.08	37.41	37.53	22 02.8	22 02.3
2434150.5	0.984	14.31	0.26	109.65	38.06	28.58	28.71	22 39.0	22 38.5
2434151.5	0.983	15.10	0.28	109.61	38.04	19.75	19.87	23 15.3	23 14.8
2434152.5	0.981	15.89	0.31	109.59	38.01	10.91	11.03	23 51.6	23 51.1
2434153.5	0.979	16.66	0.34	109.57	37.99	2.05	2.17	.. .. .	.. .. .
2434154.5	0.977	17.43	0.37	109.55	37.97	353.18	353.31	0 28.0	0 27.4
2434155.5	0.975	18.18	0.41	109.55	37.94	344.31	344.43	1 04.4	1 03.9
2434156.5	0.973	18.93	0.44	109.54	37.92	335.42	335.54	1 40.8	1 40.3
2434157.5	0.971	19.66	0.47	109.54	37.90	326.52	326.64	2 17.3	2 16.8
2434158.5	0.969	20.38	0.50	109.54	37.88	317.60	317.72	2 53.9	2 53.4
2434159.5	0.967	21.09	0.53	109.55	37.86	308.68	308.80	3 30.5	3 30.0
2434160.5	0.964	21.79	0.57	109.55	37.84	299.74	299.86	4 07.2	4 06.7
2434161.5	0.962	22.47	0.60	109.56	37.83	290.78	290.90	4 43.9	4 43.4
2434162.5	0.960	23.14	0.63	109.57	37.81	281.82	281.94	5 20.7	5 20.2
2434163.5	0.957	23.80	0.66	109.57	37.80	272.83	272.96	5 57.6	5 57.1

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2434887.5	4.48	-1.4	17.36	13.17	- 5.08	-21.48	+ 3.81	170.86
2434888.5	4.43	1.5	17.54	13.17	5.01	20.98	3.59	171.41
2434889.5	4.39	1.5	17.72	13.17	4.93	20.47	3.36	171.96
2434890.5	4.35	1.5	17.90	13.15	4.85	19.95	3.13	172.51
2434891.5	4.30	1.6	18.07	13.12	4.76	19.42	2.90	173.07
2434892.5	4.26	-1.6	18.25	13.08	- 4.67	-18.88	+ 2.67	173.62
2434893.5	4.22	1.6	18.42	13.03	4.57	18.32	2.44	174.17
2434894.5	4.18	1.7	18.60	12.97	4.46	17.76	2.21	174.73
2434895.5	4.14	1.7	18.77	12.89	4.35	17.18	1.97	175.28
2434896.5	4.11	1.7	18.94	12.81	4.24	16.59	1.74	175.84
2434897.5	4.07	-1.8	19.11	12.71	- 4.12	-15.99	+ 1.51	176.40
2434898.5	4.03	1.8	19.27	12.61	3.99	15.37	1.27	176.96
2434899.5	4.00	1.8	19.44	12.49	3.86	14.75	1.04	177.52
2434900.5	3.97	1.8	19.60	12.36	3.72	14.11	0.81	178.08
2434901.5	3.94	1.9	19.75	12.23	3.58	13.46	0.57	178.64
2434902.5	3.91	-1.9	19.91	12.08	- 3.43	-12.80	+ 0.33	179.20
2434903.5	3.88	1.9	20.06	11.92	3.28	12.14	+ 0.10	179.76
2434904.5	3.85	2.0	20.20	11.76	3.12	11.46	- 0.14	180.33
2434905.5	3.82	2.0	20.34	11.58	2.97	10.77	0.37	180.89
2434906.5	3.80	2.0	20.48	11.40	2.80	10.07	0.61	181.46
2434907.5	3.77	-2.0	20.61	11.20	- 2.64	- 9.36	- 0.85	182.03
2434908.5	3.75	2.1	20.74	11.00	2.47	8.65	1.09	182.60
2434909.5	3.73	2.1	20.86	10.80	2.30	7.92	1.33	183.17
2434910.5	3.71	2.1	20.98	10.58	2.12	7.19	1.56	183.74
2434911.5	3.69	2.1	21.09	10.36	1.95	6.45	1.80	184.31
2434912.5	3.67	-2.2	21.19	10.13	- 1.77	- 5.70	- 2.04	184.88
2434913.5	3.65	2.2	21.29	9.90	1.59	4.95	2.28	185.45
2434914.5	3.64	2.2	21.38	9.66	1.40	4.19	2.52	186.02
2434915.5	3.62	2.2	21.46	9.42	1.22	3.42	2.76	186.60
2434916.5	3.61	2.3	21.54	9.17	1.04	2.65	3.00	187.18
2434917.5	3.60	-2.3	21.61	8.92	- 0.86	- 1.87	- 3.24	187.75
2434918.5	3.59	2.3	21.67	8.67	0.67	1.09	3.48	188.33
2434919.5	3.58	2.3	21.72	8.41	0.49	- 0.31	3.72	188.91
2434920.5	3.57	2.3	21.77	8.15	0.31	+ 0.48	3.96	189.49
2434921.5	3.57	2.3	21.81	7.90	- 0.13	1.26	4.20	190.07
2434922.5	3.56	-2.3	21.84	7.64	+ 0.05	+ 2.05	- 4.44	190.65
2434923.5	3.56	2.3	21.86	7.38	0.22	2.84	4.68	191.23
2434924.5	3.56	2.3	21.87	7.12	0.40	3.63	4.92	191.81
2434925.5	3.56	2.2	21.88	6.87	0.57	4.42	5.16	192.40
2434926.5	3.56	2.2	21.88	6.62	0.73	5.21	5.40	192.98
2434927.5	3.56	-2.2	21.87	6.37	+ 0.90	+ 5.99	- 5.64	193.57
2434928.5	3.56	2.2	21.85	6.13	1.05	6.77	5.88	194.15
2434929.5	3.56	2.2	21.83	5.89	1.21	7.55	6.12	194.74
2434930.5	3.57	2.2	21.80	5.65	1.35	8.33	6.36	195.33
2434931.5	3.58	2.2	21.76	5.42	1.50	9.10	6.60	195.92
2434932.5	3.58	-2.2	21.71	5.20	+ 1.64	+ 9.86	- 6.84	196.51
2434933.5	3.59	2.1	21.66	4.99	1.77	10.62	7.08	197.10
2434934.5	3.60	2.1	21.60	4.78	1.89	11.38	7.31	197.69
2434935.5	3.61	2.1	21.54	4.58	2.01	12.12	7.55	198.29
2434936.5	3.62	2.1	21.46	4.39	2.13	12.86	7.79	198.88
2434937.5	3.64	-2.1	21.39	4.21	+ 2.23	+13.60	- 8.03	199.47
2434938.5	3.65	2.0	21.30	4.03	2.33	14.32	8.26	200.07
2434939.5	3.67	2.0	21.22	3.87	2.42	15.04	8.50	200.67
2434940.5	3.68	2.0	21.12	3.72	2.51	15.75	8.74	201.26
2434941.5	3.70	2.0	21.02	3.57	2.59	16.45	8.97	201.86
2434942.5	3.72	-2.0	20.92	3.44	+ 2.66	+17.14	- 9.21	202.46
2434943.5	3.74	2.0	20.82	3.32	2.73	17.82	9.44	203.06
2434944.5	3.76	1.9	20.70	3.20	2.78	18.49	9.68	203.66
2434945.5	3.78	1.9	20.59	3.10	2.83	19.15	9.91	204.26
2434946.5	3.80	1.9	20.47	3.01	2.88	19.81	10.14	204.86
2434947.5	3.82	-1.9	20.35	2.93	+ 2.91	+20.45	-10.38	205.47

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2434887.5	0.960	23.22	0.70	269.43	21.54	96.01	96.14	18 03.3	18 02.8
2434888.5	0.961	22.65	0.68	269.65	21.55	86.91	87.04	18 40.7	18 40.1
2434889.5	0.963	22.06	0.65	269.90	21.56	77.82	77.95	19 17.9	19 17.4
2434890.5	0.965	21.47	0.62	270.16	21.59	68.74	68.87	19 55.1	19 54.6
2434891.5	0.967	20.86	0.59	270.45	21.62	59.67	59.80	20 32.3	20 31.8
2434892.5	0.969	20.24	0.56	270.77	21.65	50.61	50.74	21 09.5	21 08.9
2434893.5	0.971	19.60	0.53	271.12	21.70	41.56	41.69	21 46.5	21 46.0
2434894.5	0.973	18.95	0.50	271.50	21.75	32.53	32.65	22 23.6	22 23.1
2434895.5	0.975	18.29	0.47	271.92	21.81	23.50	23.63	23 00.6	23 00.0
2434896.5	0.977	17.62	0.44	272.38	21.88	14.49	14.61	23 37.5	23 37.0
2434897.5	0.978	16.93	0.41	272.87	21.95	5.49	5.61	.. ..	.. ..
2434898.5	0.980	16.23	0.38	273.42	22.03	356.49	356.62	0 14.4	0 13.9
2434899.5	0.982	15.53	0.35	274.03	22.11	347.51	347.64	0 51.2	0 50.7
2434900.5	0.983	14.81	0.33	274.70	22.21	338.54	338.66	1 28.0	1 27.5
2434901.5	0.985	14.07	0.30	275.44	22.30	329.57	329.70	2 04.8	2 04.3
2434902.5	0.987	13.34	0.27	276.27	22.41	320.62	320.75	2 41.5	2 41.0
2434903.5	0.988	12.59	0.24	277.19	22.52	311.68	311.80	3 18.2	3 17.7
2434904.5	0.989	11.83	0.21	278.24	22.63	302.74	302.87	3 54.9	3 54.3
2434905.5	0.991	11.07	0.19	279.43	22.76	293.82	293.94	4 31.5	4 30.9
2434906.5	0.992	10.30	0.16	280.79	22.88	284.90	285.02	5 08.0	5 07.5
2434907.5	0.993	9.52	0.14	282.38	23.01	275.99	276.11	5 44.6	5 44.1
2434908.5	0.994	8.75	0.12	284.24	23.15	267.09	267.21	6 21.1	6 20.6
2434909.5	0.995	7.97	0.10	286.46	23.29	258.19	258.32	6 57.5	6 57.0
2434910.5	0.996	7.20	0.08	289.14	23.44	249.30	249.43	7 34.0	7 33.5
2434911.5	0.997	6.44	0.07	292.45	23.58	240.42	240.55	8 10.4	8 09.9
2434912.5	0.998	5.70	0.05	296.63	23.74	231.54	231.67	8 46.8	8 46.3
2434913.5	0.998	4.99	0.04	302.01	23.89	222.67	222.80	9 23.2	9 22.7
2434914.5	0.999	4.33	0.03	309.10	24.05	213.81	213.93	9 59.5	9 59.0
2434915.5	0.999	3.75	0.02	318.55	24.21	204.95	205.07	10 35.9	10 35.3
2434916.5	0.999	3.29	0.02	331.02	24.37	196.09	196.21	11 12.2	11 11.7
2434917.5	0.999	3.03	0.02	346.51	24.53	187.23	187.36	11 48.5	11 48.0
2434918.5	0.999	3.01	0.01	3.53	24.70	178.38	178.51	12 24.8	12 24.3
2434919.5	0.999	3.25	0.02	19.46	24.86	169.53	169.66	13 01.1	13 00.6
2434920.5	0.999	3.68	0.02	32.49	25.03	160.68	160.81	13 37.4	13 36.8
2434921.5	0.999	4.26	0.03	42.44	25.19	151.83	151.96	14 13.6	14 13.1
2434922.5	0.998	4.94	0.04	49.91	25.35	142.99	143.11	14 49.9	14 49.4
2434923.5	0.998	5.67	0.05	55.57	25.52	134.14	134.26	15 26.2	15 25.7
2434924.5	0.997	6.44	0.07	59.95	25.68	125.28	125.41	16 02.5	16 02.0
2434925.5	0.996	7.23	0.09	63.43	25.84	116.43	116.56	16 38.8	16 38.3
2434926.5	0.995	8.05	0.11	66.24	25.99	107.57	107.70	17 15.2	17 14.7
2434927.5	0.994	8.87	0.13	68.57	26.15	98.71	98.84	17 51.5	17 51.0
2434928.5	0.993	9.69	0.16	70.52	26.30	89.85	89.98	18 27.9	18 27.4
2434929.5	0.992	10.52	0.18	72.20	26.44	80.98	81.11	19 04.3	19 03.8
2434930.5	0.990	11.35	0.21	73.65	26.59	72.11	72.23	19 40.7	19 40.2
2434931.5	0.989	12.17	0.24	74.92	26.72	63.22	63.35	20 17.2	20 16.6
2434932.5	0.987	12.99	0.28	76.04	26.86	54.34	54.46	20 53.6	20 53.1
2434933.5	0.986	13.81	0.31	77.05	26.99	45.44	45.57	21 30.1	21 29.6
2434934.5	0.984	14.62	0.35	77.95	27.11	36.54	36.66	22 06.7	22 06.2
2434935.5	0.982	15.42	0.39	78.77	27.23	27.63	27.75	22 43.3	22 42.8
2434936.5	0.980	16.22	0.43	79.51	27.34	18.71	18.83	23 19.9	23 19.4
2434937.5	0.978	17.01	0.47	80.19	27.45	9.78	9.90	23 56.6	23 56.0
2434938.5	0.976	17.79	0.51	80.82	27.55	0.84	0.96	.. ..	.. ..
2434939.5	0.974	18.56	0.55	81.40	27.64	351.89	352.02	0 33.3	0 32.7
2434940.5	0.972	19.32	0.59	81.93	27.73	342.93	343.06	1 10.0	1 09.5
2434941.5	0.970	20.06	0.64	82.43	27.81	333.96	334.09	1 46.8	1 46.3
2434942.5	0.967	20.80	0.68	82.89	27.89	324.99	325.11	2 23.6	2 23.1
2434943.5	0.965	21.53	0.73	83.32	27.96	316.00	316.12	3 00.5	3 00.0
2434944.5	0.963	22.24	0.77	83.72	28.02	306.99	307.12	3 37.5	3 37.0
2434945.5	0.960	22.95	0.81	84.09	28.08	297.98	298.11	4 14.5	4 13.9
2434946.5	0.958	23.64	0.86	84.44	28.13	288.96	289.08	4 51.5	4 51.0
2434947.5	0.956	24.32	0.90	84.76	28.17	279.92	280.05	5 28.6	5 28.0

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2435696.5	3.54	-2.1	21.95	88.99	-20.36	-27.22	-22.12	244.01
2435697.5	3.52	2.1	22.12	88.98	20.33	26.54	22.24	244.64
2435698.5	3.49	2.1	22.28	88.95	20.29	25.84	22.36	245.28
2435699.5	3.46	2.1	22.45	88.91	20.26	25.13	22.48	245.91
2435700.5	3.44	2.2	22.61	88.86	20.24	24.40	22.60	246.55
2435701.5	3.42	-2.2	22.77	88.79	-20.21	-23.65	-22.71	247.18
2435702.5	3.39	2.2	22.92	88.71	20.18	22.89	22.82	247.82
2435703.5	3.37	2.2	23.07	88.61	20.16	22.11	22.93	248.45
2435704.5	3.35	2.3	23.22	88.50	20.14	21.32	23.03	249.09
2435705.5	3.33	2.3	23.36	88.37	20.12	20.52	23.13	249.72
2435706.5	3.31	-2.3	23.49	88.24	-20.11	-19.70	-23.23	250.35
2435707.5	3.29	2.3	23.62	88.09	20.09	18.87	23.33	250.99
2435708.5	3.27	2.4	23.75	87.93	20.08	18.02	23.42	251.62
2435709.5	3.26	2.4	23.87	87.75	20.07	17.16	23.51	252.26
2435710.5	3.24	2.4	23.98	87.57	20.06	16.29	23.60	252.89
2435711.5	3.23	-2.4	24.09	87.37	-20.06	-15.40	-23.68	253.53
2435712.5	3.22	2.5	24.19	87.16	20.05	14.51	23.76	254.16
2435713.5	3.20	2.5	24.28	86.94	20.05	13.60	23.84	254.80
2435714.5	3.19	2.5	24.37	86.71	20.06	12.68	23.92	255.43
2435715.5	3.18	2.5	24.45	86.47	20.06	11.75	23.99	256.07
2435716.5	3.17	-2.5	24.52	86.22	-20.07	-10.81	-24.06	256.70
2435717.5	3.17	2.5	24.58	85.97	20.08	9.86	24.12	257.34
2435718.5	3.16	2.6	24.63	85.70	20.09	8.91	24.18	257.97
2435719.5	3.15	2.6	24.67	85.43	20.10	7.95	24.24	258.60
2435720.5	3.15	2.6	24.71	85.16	20.12	6.98	24.30	259.24
2435721.5	3.14	-2.6	24.73	84.87	-20.14	− 6.00	-24.35	259.87
2435722.5	3.14	2.6	24.75	84.59	20.16	5.02	24.40	260.51
2435723.5	3.14	2.6	24.76	84.30	20.18	4.04	24.45	261.14
2435724.5	3.14	2.6	24.75	84.00	20.21	3.05	24.49	261.77
2435725.5	3.14	2.6	24.74	83.71	20.24	2.06	24.53	262.40
2435726.5	3.15	-2.6	24.72	83.42	-20.27	− 1.08	-24.57	263.04
2435727.5	3.15	2.6	24.69	83.12	20.30	− 0.09	24.60	263.67
2435728.5	3.16	2.6	24.65	82.83	20.34	+ 0.90	24.63	264.30
2435729.5	3.16	2.6	24.60	82.54	20.37	1.89	24.66	264.93
2435730.5	3.17	2.6	24.54	82.25	20.41	2.87	24.68	265.57
2435731.5	3.18	-2.6	24.47	81.96	-20.46	+ 3.85	-24.70	266.20
2435732.5	3.19	2.6	24.39	81.68	20.50	4.83	24.72	266.83
2435733.5	3.20	2.6	24.31	81.40	20.55	5.80	24.74	267.46
2435734.5	3.21	2.5	24.21	81.13	20.59	6.76	24.75	268.09
2435735.5	3.23	2.5	24.11	80.87	20.64	7.72	24.76	268.72
2435736.5	3.24	-2.5	24.00	80.61	-20.70	+ 8.67	-24.76	269.35
2435737.5	3.26	2.5	23.88	80.36	20.75	9.62	24.76	269.98
2435738.5	3.27	2.5	23.76	80.11	20.80	10.55	24.76	270.61
2435739.5	3.29	2.4	23.63	79.88	20.86	11.48	24.76	271.23
2435740.5	3.31	2.4	23.49	79.66	20.92	12.39	24.75	271.86
2435741.5	3.33	-2.4	23.35	79.44	-20.98	+13.30	-24.74	272.49
2435742.5	3.35	2.4	23.19	79.24	21.04	14.19	24.72	273.12
2435743.5	3.38	2.3	23.04	79.05	21.11	15.07	24.71	273.74
2435744.5	3.40	2.3	22.88	78.86	21.17	15.94	24.69	274.37
2435745.5	3.42	2.3	22.71	78.69	21.24	16.80	24.66	274.99
2435746.5	3.45	-2.2	22.54	78.54	-21.31	+17.65	-24.64	275.62
2435747.5	3.48	2.2	22.36	78.39	21.38	18.48	24.61	276.24
2435748.5	3.51	2.2	22.18	78.26	21.45	19.30	24.57	276.87
2435749.5	3.54	2.2	22.00	78.14	21.52	20.10	24.54	277.49
2435750.5	3.57	2.1	21.81	78.03	21.59	20.89	24.50	278.12
2435751.5	3.60	-2.1	21.62	77.94	-21.67	+21.66	-24.46	278.74
2435752.5	3.63	2.1	21.43	77.87	21.75	22.42	24.41	279.36
2435753.5	3.66	2.0	21.24	77.80	21.82	23.17	24.36	279.98
2435754.5	3.70	2.0	21.04	77.75	21.90	23.89	24.31	280.60
2435755.5	3.73	2.0	20.84	77.72	21.98	24.61	24.26	281.22
2435756.5	3.77	-1.9	20.64	77.70	-22.06	+25.30	-24.20	281.84

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2435696.5	0.952	25.40	1.06	254.74	335.84	212.01	212.14	10 07.3	10 06.7
2435697.5	0.954	24.77	1.02	255.09	335.84	202.92	203.05	10 44.6	10 44.0
2435698.5	0.956	24.12	0.97	255.46	335.86	193.85	193.98	11 21.8	11 21.2
2435699.5	0.959	23.47	0.93	255.85	335.87	184.79	184.92	11 58.9	11 58.4
2435700.5	0.961	22.80	0.88	256.26	335.90	175.74	175.87	12 36.0	12 35.5
2435701.5	0.963	22.12	0.84	256.71	335.93	166.71	166.84	13 13.0	13 12.5
2435702.5	0.965	21.43	0.79	257.18	335.96	157.69	157.82	13 50.0	13 49.5
2435703.5	0.968	20.73	0.75	257.69	336.01	148.68	148.81	14 26.9	14 26.4
2435704.5	0.970	20.01	0.70	258.24	336.06	139.69	139.82	15 03.8	15 03.3
2435705.5	0.972	19.29	0.66	258.82	336.12	130.71	130.84	15 40.6	15 40.1
2435706.5	0.974	18.55	0.61	259.46	336.18	121.74	121.87	16 17.3	16 16.8
2435707.5	0.976	17.80	0.57	260.15	336.25	112.79	112.92	16 54.0	16 53.5
2435708.5	0.978	17.05	0.52	260.90	336.33	103.85	103.98	17 30.7	17 30.1
2435709.5	0.980	16.28	0.48	261.73	336.41	94.92	95.05	18 07.3	18 06.7
2435710.5	0.982	15.51	0.44	262.63	336.50	86.00	86.13	18 43.8	18 43.3
2435711.5	0.984	14.73	0.40	263.63	336.59	77.09	77.22	19 20.3	19 19.8
2435712.5	0.985	13.95	0.36	264.75	336.69	68.20	68.33	19 56.7	19 56.2
2435713.5	0.987	13.16	0.32	266.00	336.80	59.31	59.44	20 33.2	20 32.6
2435714.5	0.988	12.36	0.28	267.41	336.91	50.44	50.57	21 09.5	21 09.0
2435715.5	0.990	11.57	0.25	269.01	337.02	41.57	41.70	21 45.8	21 45.3
2435716.5	0.991	10.77	0.22	270.84	337.14	32.71	32.84	22 22.1	22 21.6
2435717.5	0.992	9.99	0.19	272.96	337.27	23.86	23.99	22 58.4	22 57.9
2435718.5	0.994	9.20	0.16	275.44	337.40	15.02	15.15	23 34.6	23 34.1
2435719.5	0.995	8.44	0.13	278.38	337.53	6.18	6.31	.. ..	.. ...
2435720.5	0.996	7.69	0.11	281.89	337.66	357.35	357.48	0 10.9	0 10.3
2435721.5	0.996	6.97	0.09	286.13	337.80	348.53	348.66	0 47.0	0 46.5
2435722.5	0.997	6.29	0.07	291.31	337.95	339.71	339.84	1 23.2	1 22.7
2435723.5	0.998	5.66	0.06	297.67	338.09	330.89	331.02	1 59.4	1 58.8
2435724.5	0.998	5.12	0.05	305.47	338.24	322.07	322.20	2 35.5	2 35.0
2435725.5	0.998	4.70	0.04	314.87	338.39	313.26	313.39	3 11.7	3 11.1
2435726.5	0.999	4.41	0.04	325.80	338.54	304.45	304.58	3 47.8	3 47.3
2435727.5	0.999	4.30	0.03	337.72	338.69	295.63	295.76	4 23.9	4 23.4
2435728.5	0.999	4.38	0.04	349.73	338.84	286.82	286.95	5 00.1	4 59.6
2435729.5	0.998	4.63	0.04	0.85	338.99	278.00	278.13	5 36.2	5 35.7
2435730.5	0.998	5.03	0.05	10.51	339.14	269.18	269.31	6 12.4	6 11.9
2435731.5	0.998	5.54	0.06	18.55	339.29	260.35	260.48	6 48.6	6 48.1
2435732.5	0.997	6.14	0.07	25.12	339.43	251.52	251.65	7 24.8	7 24.3
2435733.5	0.996	6.80	0.09	30.46	339.58	242.69	242.82	8 01.1	8 00.5
2435734.5	0.996	7.50	0.10	34.83	339.72	233.85	233.98	8 37.3	8 36.8
2435735.5	0.995	8.23	0.12	38.43	339.86	225.00	225.13	9 13.6	9 13.1
2435736.5	0.994	8.98	0.15	41.44	340.00	216.15	216.28	9 49.9	9 49.4
2435737.5	0.993	9.74	0.17	43.98	340.13	207.29	207.42	10 26.3	10 25.7
2435738.5	0.992	10.50	0.20	46.15	340.26	198.42	198.55	11 02.7	11 02.1
2435739.5	0.990	11.27	0.23	48.01	340.39	189.54	189.67	11 39.1	11 38.6
2435740.5	0.989	12.05	0.26	49.64	340.51	180.65	180.78	12 15.6	12 15.0
2435741.5	0.988	12.82	0.29	51.06	340.62	171.75	171.88	12 52.1	12 51.6
2435742.5	0.986	13.58	0.32	52.32	340.73	162.84	162.97	13 28.7	13 28.1
2435743.5	0.984	14.34	0.36	53.44	340.84	153.92	154.05	14 05.3	14 04.7
2435744.5	0.983	15.10	0.39	54.44	340.94	144.99	145.12	14 41.9	14 41.4
2435745.5	0.981	15.84	0.43	55.35	341.03	136.05	136.18	15 18.7	15 18.1
2435746.5	0.979	16.58	0.47	56.17	341.12	127.09	127.22	15 55.4	15 54.9
2435747.5	0.977	17.31	0.51	56.91	341.20	118.12	118.25	16 32.3	16 31.7
2435748.5	0.975	18.02	0.54	57.59	341.28	109.14	109.27	17 09.2	17 08.6
2435749.5	0.974	18.73	0.58	58.21	341.34	100.14	100.27	17 46.1	17 45.6
2435750.5	0.972	19.43	0.62	58.78	341.40	91.13	91.26	18 23.1	18 22.6
2435751.5	0.970	20.11	0.66	59.30	341.46	82.11	82.24	19 00.2	18 59.7
2435752.5	0.967	20.78	0.70	59.79	341.50	73.07	73.20	19 37.3	19 36.8
2435753.5	0.965	21.44	0.73	60.24	341.54	64.02	64.15	20 14.5	20 14.0
2435754.5	0.963	22.09	0.77	60.65	341.57	54.95	55.08	20 51.8	20 51.2
2435755.5	0.961	22.72	0.81	61.04	341.59	45.87	46.00	21 29.1	21 28.6
2435756.5	0.959	23.34	0.84	61.40	341.61	36.77	36.90	22 06.5	22 06.0

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2436493.5	4.39	-1.5	17.73	158.91	- 7.75	-24.26	-18.17	311.89
2436494.5	4.36	1.5	17.84	158.83	7.84	23.60	18.00	312.47
2436495.5	4.33	1.5	17.95	158.73	7.93	22.93	17.83	313.05
2436496.5	4.31	1.6	18.05	158.63	8.02	22.24	17.65	313.62
2436497.5	4.28	1.6	18.15	158.51	8.13	21.55	17.48	314.20
2436498.5	4.26	-1.6	18.25	158.38	- 8.24	-20.84	-17.30	314.78
2436499.5	4.24	1.6	18.34	158.23	8.36	20.12	17.12	315.35
2436500.5	4.22	1.6	18.43	158.08	8.48	19.40	16.94	315.92
2436501.5	4.20	1.7	18.52	157.91	8.61	18.66	16.76	316.50
2436502.5	4.18	1.7	18.60	157.73	8.75	17.91	16.58	317.07
2436503.5	4.16	-1.7	18.68	157.53	- 8.89	-17.16	-16.39	317.64
2436504.5	4.15	1.7	18.76	157.33	9.03	16.39	16.21	318.21
2436505.5	4.13	1.7	18.82	157.11	9.19	15.61	16.02	318.78
2436506.5	4.12	1.8	18.89	156.89	9.35	14.83	15.83	319.35
2436507.5	4.11	1.8	18.95	156.65	9.51	14.04	15.65	319.92
2436508.5	4.09	-1.8	19.00	156.40	- 9.68	-13.24	-15.46	320.48
2436509.5	4.08	1.8	19.05	156.15	9.85	12.43	15.27	321.05
2436510.5	4.08	1.8	19.09	155.88	10.03	11.61	15.08	321.61
2436511.5	4.07	1.8	19.12	155.61	10.21	10.79	14.88	322.18
2436512.5	4.06	1.9	19.15	155.32	10.39	9.96	14.69	322.74
2436513.5	4.06	-1.9	19.17	155.04	-10.58	- 9.13	-14.50	323.30
2436514.5	4.06	1.9	19.18	154.74	10.77	8.29	14.30	323.86
2436515.5	4.05	1.9	19.19	154.44	10.96	7.44	14.10	324.42
2436516.5	4.05	1.9	19.19	154.13	11.15	6.60	13.91	324.98
2436517.5	4.05	1.9	19.18	153.82	11.35	5.75	13.71	325.54
2436518.5	4.06	-1.9	19.17	153.50	-11.55	- 4.90	-13.51	326.10
2436519.5	4.06	1.9	19.15	153.18	11.74	4.04	13.31	326.65
2436520.5	4.07	2.0	19.12	152.86	11.94	3.19	13.11	327.21
2436521.5	4.08	2.0	19.08	152.54	12.14	2.34	12.91	327.76
2436522.5	4.08	2.0	19.04	152.22	12.34	1.49	12.71	328.31
2436523.5	4.10	-2.0	18.99	151.89	-12.53	- 0.64	-12.51	328.87
2436524.5	4.11	2.0	18.93	151.57	12.72	+ 0.21	12.30	329.42
2436525.5	4.12	1.9	18.87	151.25	12.92	1.05	12.10	329.97
2436526.5	4.14	1.9	18.80	150.93	13.11	1.89	11.90	330.52
2436527.5	4.15	1.9	18.72	150.62	13.29	2.72	11.69	331.07
2436528.5	4.17	-1.9	18.64	150.31	-13.47	+ 3.55	-11.49	331.61
2436529.5	4.19	1.8	18.55	150.00	13.66	4.37	11.28	332.16
2436530.5	4.21	1.8	18.45	149.71	13.83	5.19	11.07	332.70
2436531.5	4.24	1.8	18.35	149.41	14.00	5.99	10.87	333.25
2436532.5	4.26	1.8	18.25	149.13	14.17	6.79	10.66	333.79
2436533.5	4.29	-1.7	18.14	148.85	-14.34	+ 7.58	-10.45	334.34
2436534.5	4.32	1.7	18.02	148.58	14.49	8.36	10.24	334.88
2436535.5	4.35	1.7	17.90	148.31	14.65	9.13	10.03	335.42
2436536.5	4.38	1.7	17.77	148.06	14.80	9.89	9.83	335.96
2436537.5	4.41	1.6	17.64	147.81	14.94	10.64	9.62	336.50
2436538.5	4.44	-1.6	17.51	147.58	-15.08	+11.37	- 9.41	337.03
2436539.5	4.48	1.6	17.37	147.36	15.21	12.10	9.20	337.57
2436540.5	4.51	1.5	17.23	147.14	15.34	12.81	8.98	338.11
2436541.5	4.55	1.5	17.09	146.94	15.46	13.51	8.77	338.64
2436542.5	4.59	1.5	16.95	146.75	15.58	14.20	8.56	339.18
2436543.5	4.63	-1.4	16.80	146.57	-15.68	+14.88	- 8.35	339.71
2436544.5	4.67	1.4	16.65	146.40	15.79	15.54	8.14	340.24
2436545.5	4.71	1.4	16.50	146.24	15.88	16.18	7.93	340.78
2436546.5	4.76	1.3	16.34	146.10	15.98	16.82	7.72	341.31
2436547.5	4.80	1.3	16.19	145.97	16.06	17.44	7.50	341.84
2436548.5	4.85	-1.3	16.03	145.85	-16.14	+18.05	- 7.29	342.36
2436549.5	4.90	1.2	15.88	145.75	16.21	18.64	7.08	342.89
2436550.5	4.95	1.2	15.72	145.65	16.28	19.22	6.86	343.42
2436551.5	5.00	1.2	15.56	145.58	16.34	19.78	6.65	343.95
2436552.5	5.05	1.1	15.40	145.51	16.39	20.33	6.44	344.47
2436553.5	5.10	-1.1	15.24	145.46	-16.44	+20.86	- 6.23	344.99

Julian Day.	*k*	*i*	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2436493.5	0.950	25.79	0.88	260.03	323.83	82.79	82.92	18 57.3	18 56.8
2436494.5	0.953	25.10	0.84	259.99	323.81	73.77	73.90	19 34.3	19 33.8
2436495.5	0.955	24.40	0.80	259.94	323.77	64.76	64.89	20 11.2	20 10.7
2436496.5	0.958	23.69	0.76	259.89	323.74	55.76	55.89	20 48.1	20 47.6
2436497.5	0.960	22.96	0.72	259.82	323.70	46.78	46.91	21 24.9	21 24.4
2436498.5	0.963	22.22	0.68	259.75	323.66	37.81	37.94	22 01.7	22 01.1
2436499.5	0.965	21.47	0.64	259.67	323.61	28.85	28.98	22 38.4	22 37.8
2436500.5	0.968	20.70	0.59	259.59	323.56	19.90	20.04	23 15.0	23 14.5
2436501.5	0.970	19.92	0.55	259.49	323.51	10.97	11.10	23 51.6	23 51.1
2436502.5	0.972	19.13	0.51	259.39	323.46	2.05	2.18	.. .. .	.. .. .
2436503.5	0.975	18.33	0.47	259.27	323.41	353.13	353.27	0 28.2	0 27.6
2436504.5	0.977	17.51	0.43	259.15	323.35	344.23	344.37	1 04.7	1 04.1
2436505.5	0.979	16.68	0.40	259.01	323.29	335.35	335.48	1 41.1	1 40.6
2436506.5	0.981	15.85	0.36	258.87	323.23	326.47	326.60	2 17.5	2 17.0
2436507.5	0.983	15.00	0.32	258.72	323.17	317.60	317.73	2 53.9	2 53.3
2436508.5	0.985	14.14	0.29	258.55	323.10	308.74	308.87	3 30.2	3 29.7
2436509.5	0.987	13.27	0.25	258.36	323.04	299.89	300.03	4 06.5	4 05.9
2436510.5	0.988	12.40	0.22	258.17	322.97	291.05	291.18	4 42.7	4 42.2
2436511.5	0.990	11.51	0.19	257.95	322.90	282.22	282.35	5 18.9	5 18.4
2436512.5	0.991	10.62	0.16	257.71	322.84	273.40	273.53	5 55.1	5 54.6
2436513.5	0.993	9.72	0.14	257.45	322.77	264.58	264.71	6 31.3	6 30.7
2436514.5	0.994	8.82	0.11	257.15	322.70	255.77	255.90	7 07.4	7 06.8
2436515.5	0.995	7.91	0.09	256.80	322.63	246.96	247.09	7 43.5	7 42.9
2436516.5	0.996	7.00	0.07	256.40	322.57	238.16	238.29	8 19.6	8 19.0
2436517.5	0.997	6.08	0.05	255.91	322.50	229.36	229.50	8 55.6	8 55.1
2436518.5	0.998	5.16	0.04	255.28	322.43	220.57	220.70	9 31.7	9 31.1
2436519.5	0.999	4.24	0.03	254.44	322.37	211.78	211.91	10 07.7	10 07.2
2436520.5	0.999	3.32	0.02	253.22	322.31	202.99	203.13	10 43.7	10 43.2
2436521.5	1.000	2.40	0.01	251.16	322.24	194.21	194.34	11 19.8	11 19.2
2436522.5	1.000	1.49	0.00	246.73	322.18	185.42	185.55	11 55.8	11 55.3
2436523.5	1.000	0.62	0.00	229.74	322.13	176.63	176.76	12 31.8	12 31.3
2436524.5	1.000	0.47	0.00	115.71	322.07	167.84	167.97	13 07.9	13 07.3
2436525.5	1.000	1.32	0.00	90.31	322.01	159.05	159.18	13 43.9	13 43.4
2436526.5	1.000	2.21	0.01	84.96	321.96	150.26	150.39	14 20.0	14 19.5
2436527.5	0.999	3.11	0.01	82.64	321.91	141.46	141.59	14 56.1	14 55.5
2436528.5	0.999	4.00	0.02	81.30	321.86	132.65	132.79	15 32.2	15 31.6
2436529.5	0.998	4.89	0.03	80.41	321.82	123.85	123.98	16 08.3	16 07.8
2436530.5	0.997	5.77	0.05	79.76	321.77	115.03	115.17	16 44.5	16 43.9
2436531.5	0.997	6.65	0.06	79.25	321.73	106.21	106.35	17 20.7	17 20.1
2436532.5	0.996	7.51	0.08	78.83	321.69	97.39	97.52	17 56.9	17 56.3
2436533.5	0.995	8.37	0.10	78.48	321.65	88.55	88.68	18 33.1	18 32.6
2436534.5	0.994	9.21	0.12	78.17	321.62	79.71	79.84	19 09.4	19 08.9
2436535.5	0.992	10.05	0.14	77.91	321.58	70.85	70.99	19 45.8	19 45.2
2436536.5	0.991	10.87	0.16	77.66	321.55	61.99	62.13	20 22.1	20 21.6
2436537.5	0.990	11.68	0.18	77.44	321.52	53.12	53.25	20 58.6	20 58.0
2436538.5	0.988	12.48	0.21	77.24	321.49	44.24	44.37	21 35.0	21 34.5
2436539.5	0.987	13.27	0.23	77.05	321.47	35.35	35.48	22 11.5	22 11.0
2436540.5	0.985	14.04	0.26	76.88	321.44	26.44	26.58	22 48.1	22 47.6
2436541.5	0.983	14.81	0.28	76.72	321.42	17.53	17.66	23 24.7	23 24.2
2436542.5	0.982	15.55	0.31	76.57	321.40	8.60	8.74	.. .. .	.. .. .
2436543.5	0.980	16.29	0.34	76.43	321.38	359.67	359.80	0 01.4	0 00.8
2436544.5	0.978	17.01	0.36	76.29	321.36	350.71	350.85	0 38.1	0 37.5
2436545.5	0.976	17.72	0.39	76.17	321.34	341.75	341.88	1 14.9	1 14.3
2436546.5	0.974	18.41	0.42	76.05	321.33	332.78	332.91	1 51.7	1 51.1
2436547.5	0.973	19.08	0.44	75.94	321.32	323.79	323.92	2 28.6	2 28.0
2436548.5	0.971	19.75	0.47	75.84	321.30	314.79	314.92	3 05.5	3 05.0
2436549.5	0.969	20.40	0.50	75.74	321.29	305.77	305.90	3 42.5	3 41.9
2436550.5	0.967	21.03	0.52	75.65	321.28	296.74	296.88	4 19.5	4 19.0
2436551.5	0.965	21.65	0.55	75.57	321.27	287.70	287.84	4 56.7	4 56.1
2436552.5	0.963	22.25	0.57	75.49	321.26	278.65	278.78	5 33.8	5 33.3
2436553.5	0.961	22.84	0.60	75.42	321.25	269.58	269.71	6 11.0	6 10.5

Julian Day	Light-time	Stellar Magnitude	Diameter	$A_E+180°$	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2437268.5	5.55	−0.9	14.01	201.91	+ 8.82	−22.51	− 0.28	359.33
2437269.5	5.51	0.9	14.11	201.80	8.72	21.95	0.07	359.83
2437270.5	5.48	0.9	14.20	201.68	8.62	21.38	+ 0.14	0.33
2437271.5	5.44	0.9	14.29	201.54	8.50	20.79	0.35	0.83
2437272.5	5.41	0.9	14.37	201.40	8.39	20.19	0.56	1.33
2437273.5	5.38	−1.0	14.46	201.24	+ 8.26	−19.58	+ 0.76	1.82
2437274.5	5.35	1.0	14.54	201.06	8.13	18.96	0.97	2.32
2437275.5	5.32	1.0	14.62	200.88	8.00	18.33	1.18	2.81
2437276.5	5.29	1.0	14.70	200.68	7.86	17.68	1.38	3.31
2437277.5	5.26	1.0	14.77	200.47	7.72	17.02	1.59	3.80
2437278.5	5.24	−1.1	14.85	200.25	+ 7.57	−16.35	+ 1.80	4.29
2437279.5	5.22	1.1	14.91	200.02	7.41	15.67	2.00	4.79
2437280.5	5.19	1.1	14.98	199.78	7.25	14.98	2.21	5.28
2437281.5	5.17	1.1	15.04	199.52	7.09	14.28	2.41	5.77
2437282.5	5.15	1.1	15.10	199.26	6.92	13.57	2.62	6.26
2437283.5	5.13	−1.2	15.15	198.98	+ 6.75	−12.85	+ 2.82	6.75
2437284.5	5.12	1.2	15.20	198.70	6.57	12.12	3.02	7.23
2437285.5	5.10	1.2	15.25	198.40	6.40	11.39	3.23	7.72
2437286.5	5.09	1.2	15.29	198.10	6.22	10.64	3.43	8.21
2437287.5	5.08	1.2	15.32	197.79	6.03	9.89	3.63	8.69
2437288.5	5.07	−1.2	15.35	197.48	+ 5.84	− 9.13	+ 3.83	9.18
2437289.5	5.06	1.3	15.38	197.15	5.66	8.36	4.03	9.66
2437290.5	5.05	1.3	15.40	196.82	5.47	7.59	4.23	10.15
2437291.5	5.05	1.3	15.41	196.49	5.28	6.82	4.43	10.63
2437292.5	5.04	1.3	15.42	196.15	5.08	6.04	4.63	11.11
2437293.5	5.04	−1.3	15.42	195.81	+ 4.89	− 5.25	+ 4.83	11.59
2437294.5	5.04	1.3	15.42	195.46	4.70	4.47	5.03	12.08
2437295.5	5.04	1.3	15.42	195.11	4.50	3.68	5.22	12.56
2437296.5	5.05	1.3	15.40	194.77	4.31	2.89	5.42	13.04
2437297.5	5.06	1.3	15.39	194.42	4.12	2.10	5.62	13.51
2437298.5	5.06	−1.3	15.36	194.07	+ 3.93	− 1.32	+ 5.81	13.99
2437299.5	5.07	1.3	15.33	193.72	3.74	− 0.53	6.01	14.47
2437300.5	5.08	1.3	15.30	193.37	3.56	+ 0.26	6.20	14.95
2437301.5	5.10	1.3	15.26	193.02	3.37	1.04	6.40	15.42
2437302.5	5.11	1.3	15.22	192.68	3.19	1.82	6.59	15.90
2437303.5	5.13	−1.3	15.17	192.34	+ 3.01	+ 2.60	+ 6.78	16.37
2437304.5	5.15	1.2	15.11	192.00	2.84	3.37	6.97	16.85
2437305.5	5.17	1.2	15.05	191.67	2.67	4.14	7.16	17.32
2437306.5	5.19	1.2	14.99	191.34	2.50	4.91	7.36	17.80
2437307.5	5.21	1.2	14.92	191.02	2.34	5.66	7.55	18.27
2437308.5	5.24	−1.2	14.85	190.71	+ 2.18	+ 6.41	+ 7.73	18.74
2437309.5	5.26	1.1	14.77	190.40	2.03	7.16	7.92	19.21
2437310.5	5.29	1.1	14.69	190.10	1.88	7.89	8.11	19.68
2437311.5	5.32	1.1	14.61	189.81	1.73	8.62	8.30	20.15
2437312.5	5.36	1.1	14.52	189.53	1.60	9.34	8.48	20.62
2437313.5	5.39	−1.0	14.43	189.25	+ 1.47	+10.05	+ 8.67	21.09
2437314.5	5.42	1.0	14.34	188.99	1.34	10.75	8.85	21.56
2437315.5	5.46	1.0	14.24	188.73	1.22	11.44	9.04	22.03
2437316.5	5.50	0.9	14.14	188.49	1.11	12.12	9.22	22.50
2437317.5	5.54	0.9	14.04	188.25	1.00	12.79	9.41	22.96
2437318.5	5.58	−0.9	13.93	188.03	+ 0.90	+13.45	+ 9.59	23.43
2437319.5	5.62	0.9	13.83	187.81	0.80	14.10	9.77	23.90
2437320.5	5.67	0.8	13.72	187.61	0.72	14.74	9.95	24.36
2437321.5	5.72	0.8	13.61	187.42	0.64	15.36	10.13	24.83
2437322.5	5.76	0.8	13.50	187.24	0.56	15.98	10.31	25.29
2437323.5	5.81	−0.7	13.38	187.08	+ 0.49	+16.58	+10.49	25.75
2437324.5	5.86	0.7	13.27	186.92	0.43	17.17	10.66	26.22
2437325.5	5.91	0.7	13.16	186.78	0.38	17.75	10.84	26.68
2437326.5	5.96	0.7	13.04	186.64	0.33	18.32	11.02	27.14
2437327.5	6.02	0.6	12.92	186.52	0.29	18.87	11.19	27.60
2437328.5	6.07	−0.6	12.81	186.42	+ 0.25	+19.42	+11.36	28.06

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2437268.5	0.956	24.20	0.62	274.90	343.96	180.77	180.91	12 15.3	12 14.7
2437269.5	0.958	23.56	0.59	274.67	343.89	171.78	171.92	12 52.1	12 51.6
2437270.5	0.961	22.92	0.56	274.41	343.80	162.80	162.94	13 28.9	13 28.4
2437271.5	0.963	22.25	0.53	274.14	343.71	153.84	153.98	14 05.7	14 05.1
2437272.5	0.965	21.58	0.50	273.85	343.61	144.89	145.02	14 42.4	14 41.8
2437273.5	0.967	20.89	0.48	273.53	343.50	135.95	136.08	15 19.0	15 18.4
2437274.5	0.969	20.19	0.45	273.18	343.38	127.02	127.16	15 55.6	15 55.0
2437275.5	0.971	19.48	0.42	272.81	343.25	118.10	118.24	16 32.1	16 31.6
2437276.5	0.973	18.76	0.39	272.41	343.12	109.20	109.33	17 08.6	17 08.1
2437277.5	0.975	18.02	0.36	271.98	342.98	100.30	100.44	17 45.1	17 44.5
2437278.5	0.977	17.28	0.33	271.51	342.83	91.42	91.56	18 21.4	18 20.9
2437279.5	0.979	16.52	0.31	271.00	342.67	82.55	82.69	18 57.8	18 57.2
2437280.5	0.981	15.75	0.28	270.44	342.51	73.70	73.83	19 34.1	19 33.5
2437281.5	0.983	14.97	0.26	269.83	342.34	64.85	64.99	20 10.3	20 09.8
2437282.5	0.985	14.19	0.23	269.16	342.16	56.01	56.15	20 46.5	20 46.0
2437283.5	0.986	13.39	0.21	268.42	341.97	47.18	47.32	21 22.7	21 22.1
2437284.5	0.988	12.59	0.18	267.59	341.79	38.36	38.50	21 58.8	21 58.3
2437285.5	0.989	11.77	0.16	266.67	341.59	29.55	29.69	22 34.9	22 34.4
2437286.5	0.991	10.96	0.14	265.62	341.39	20.75	20.88	23 11.0	23 10.4
2437287.5	0.992	10.14	0.12	264.42	341.19	11.95	12.09	23 47.0	23 46.5
2437288.5	0.993	9.31	0.10	263.04	340.98	3.16	3.30	.. .. .	.. .. .
2437289.5	0.995	8.49	0.08	261.41	340.77	354.38	354.52	0 23.0	0 22.5
2437290.5	0.996	7.66	0.07	259.47	340.55	345.60	345.74	0 59.0	0 58.5
2437291.5	0.996	6.84	0.05	257.09	340.33	336.83	336.97	1 35.0	1 34.4
2437292.5	0.997	6.03	0.04	254.12	340.11	328.06	328.20	2 10.9	2 10.4
2437293.5	0.998	5.23	0.03	250.29	339.89	319.30	319.43	2 46.9	2 46.3
2437294.5	0.998	4.46	0.02	245.19	339.67	310.53	310.67	3 22.8	3 22.2
2437295.5	0.999	3.74	0.02	238.12	339.44	301.77	301.91	3 58.7	3 58.2
2437296.5	0.999	3.09	0.01	227.96	339.22	293.01	293.15	4 34.6	4 34.1
2437297.5	0.999	2.57	0.01	213.27	338.99	284.25	284.39	5 10.5	5 10.0
2437298.5	1.000	2.29	0.01	193.43	338.77	275.49	275.63	5 46.5	5 45.9
2437299.5	1.000	2.33	0.01	171.47	338.55	266.73	266.87	6 22.4	6 21.8
2437300.5	0.999	2.66	0.01	152.70	338.33	257.97	258.11	6 58.3	6 57.7
2437301.5	0.999	3.20	0.01	139.14	338.11	249.20	249.34	7 34.2	7 33.7
2437302.5	0.999	3.86	0.02	129.80	337.89	240.44	240.57	8 10.2	8 09.6
2437303.5	0.998	4.58	0.02	123.25	337.68	231.66	231.80	8 46.2	8 45.6
2437304.5	0.998	5.33	0.03	118.48	337.47	222.89	223.03	9 22.2	9 21.6
2437305.5	0.997	6.11	0.04	114.87	337.26	214.11	214.24	9 58.2	9 57.6
2437306.5	0.996	6.89	0.05	112.05	337.06	205.32	205.46	10 34.2	10 33.6
2437307.5	0.996	7.68	0.07	109.78	336.87	196.53	196.66	11 10.3	11 09.7
2437308.5	0.995	8.47	0.08	107.91	336.67	187.73	187.86	11 46.4	11 45.8
2437309.5	0.993	9.26	0.10	106.34	336.49	178.92	179.06	12 22.5	12 21.9
2437310.5	0.992	10.04	0.11	104.99	336.31	170.10	170.24	12 58.7	12 58.1
2437311.5	0.991	10.81	0.13	103.83	336.13	161.28	161.42	13 34.9	13 34.3
2437312.5	0.990	11.58	0.15	102.80	335.96	152.45	152.59	14 11.1	14 10.6
2437313.5	0.988	12.33	0.17	101.89	335.80	143.61	143.74	14 47.4	14 46.8
2437314.5	0.987	13.08	0.19	101.08	335.64	134.75	134.89	15 23.7	15 23.2
2437315.5	0.986	13.82	0.21	100.35	335.49	125.89	126.03	16 00.1	15 59.5
2437316.5	0.984	14.54	0.23	99.68	335.34	117.02	117.16	16 36.5	16 35.9
2437317.5	0.982	15.26	0.25	99.07	335.21	108.14	108.28	17 13.0	17 12.4
2437318.5	0.981	15.96	0.27	98.52	335.08	99.24	99.38	17 49.5	17 48.9
2437319.5	0.979	16.65	0.29	98.01	334.95	90.34	90.48	18 26.0	18 25.5
2437320.5	0.977	17.33	0.31	97.53	334.84	81.42	81.56	19 02.7	19 02.1
2437321.5	0.976	17.99	0.33	97.10	334.73	72.49	72.63	19 39.3	19 38.8
2437322.5	0.974	18.64	0.35	96.69	334.63	63.55	63.69	20 16.0	20 15.5
2437323.5	0.972	19.28	0.38	96.32	334.53	54.60	54.74	20 52.8	20 52.2
2437324.5	0.970	19.90	0.40	95.97	334.45	45.64	45.77	21 29.6	21 29.1
2437325.5	0.968	20.51	0.42	95.64	334.37	36.66	36.80	22 06.5	22 05.9
2437326.5	0.966	21.11	0.44	95.34	334.29	27.67	27.81	22 43.4	22 42.8
2437327.5	0.965	21.69	0.46	95.06	334.23	18.67	18.81	23 20.4	23 19.8
2437328.5	0.963	22.26	0.48	94.80	334.17	9.66	9.79	23 57.4	23 56.8

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2438034.5	6.31	-0.5	12.33	237.59	+19.27	-23.44	+14.52	36.75
2438035.5	6.26	0.5	12.42	237.46	19.20	22.87	14.67	37.21
2438036.5	6.22	0.5	12.51	237.31	19.13	22.29	14.83	37.66
2438037.5	6.17	0.6	12.60	237.15	19.06	21.69	14.98	38.11
2438038.5	6.13	0.6	12.69	236.98	18.98	21.08	15.13	38.56
2438039.5	6.09	-0.6	12.77	236.79	+18.90	-20.45	+15.29	39.01
2438040.5	6.05	0.6	12.86	236.59	18.82	19.81	15.44	39.46
2438041.5	6.01	0.7	12.94	236.37	18.73	19.16	15.59	39.91
2438042.5	5.97	0.7	13.02	236.15	18.65	18.49	15.74	40.36
2438043.5	5.94	0.7	13.10	235.91	18.56	17.81	15.89	40.81
2438044.5	5.91	-0.7	13.17	235.65	+18.46	-17.12	+16.03	41.25
2438045.5	5.87	0.7	13.25	235.39	18.37	16.41	16.18	41.70
2438046.5	5.84	0.8	13.32	235.11	18.27	15.69	16.32	42.15
2438047.5	5.81	0.8	13.38	234.82	18.17	14.96	16.47	42.60
2438048.5	5.78	0.8	13.45	234.52	18.07	14.22	16.61	43.04
2438049.5	5.76	-0.8	13.51	234.21	+17.97	-13.47	+16.75	43.49
2438050.5	5.73	0.8	13.57	233.89	17.86	12.70	16.90	43.94
2438051.5	5.71	0.9	13.62	233.56	17.76	11.93	17.04	44.38
2438052.5	5.69	0.9	13.68	233.21	17.65	11.14	17.17	44.83
2438053.5	5.67	0.9	13.72	232.87	17.54	10.35	17.31	45.27
2438054.5	5.65	-0.9	13.77	232.51	+17.43	- 9.55	+17.45	45.72
2438055.5	5.63	0.9	13.81	232.14	17.31	8.74	17.59	46.16
2438056.5	5.62	0.9	13.84	231.77	17.20	7.92	17.72	46.61
2438057.5	5.61	1.0	13.87	231.39	17.08	7.10	17.85	47.05
2438058.5	5.60	1.0	13.90	231.01	16.97	6.27	17.99	47.50
2438059.5	5.59	-1.0	13.92	230.62	+16.85	- 5.44	+18.12	47.94
2438060.5	5.58	1.0	13.94	230.23	16.74	4.60	18.25	48.38
2438061.5	5.58	1.0	13.95	229.84	16.62	3.76	18.38	48.83
2438062.5	5.57	1.0	13.96	229.44	16.51	2.92	18.51	49.27
2438063.5	5.57	1.0	13.96	229.04	16.39	2.07	18.63	49.71
2438064.5	5.57	-1.0	13.96	228.65	+16.28	- 1.23	+18.76	50.16
2438065.5	5.57	1.0	13.95	228.25	16.16	- 0.38	18.88	50.60
2438066.5	5.58	1.0	13.94	227.85	16.05	+ 0.47	19.01	51.04
2438067.5	5.59	1.0	13.93	227.46	15.94	1.31	19.13	51.48
2438068.5	5.59	1.0	13.91	227.06	15.83	2.15	19.25	51.92
2438069.5	5.60	-1.0	13.88	226.67	+15.72	+ 2.99	+19.37	52.37
2438070.5	5.61	1.0	13.85	226.28	15.62	3.83	19.49	52.81
2438071.5	5.63	1.0	13.82	225.90	15.51	4.66	19.61	53.25
2438072.5	5.64	0.9	13.78	225.52	15.41	5.49	19.73	53.69
2438073.5	5.66	0.9	13.74	225.15	15.31	6.32	19.84	54.13
2438074.5	5.68	-0.9	13.69	224.79	+15.21	+ 7.13	+19.96	54.57
2438075.5	5.70	0.9	13.64	224.43	15.12	7.95	20.07	55.01
2438076.5	5.73	0.9	13.59	224.08	15.03	8.75	20.18	55.45
2438077.5	5.75	0.8	13.53	223.73	14.94	9.55	20.29	55.89
2438078.5	5.78	0.8	13.47	223.40	14.86	10.34	20.40	56.33
2438079.5	5.80	-0.8	13.40	223.07	+14.78	+11.12	+20.51	56.77
2438080.5	5.83	0.8	13.33	222.75	14.70	11.89	20.62	57.21
2438081.5	5.87	0.8	13.26	222.45	14.63	12.65	20.72	57.64
2438082.5	5.90	0.7	13.19	222.15	14.56	13.40	20.83	58.08
2438083.5	5.93	0.7	13.11	221.87	14.50	14.14	20.93	58.52
2438084.5	5.97	-0.7	13.03	221.59	+14.44	+14.87	+21.03	58.96
2438085.5	6.00	0.7	12.95	221.33	14.38	15.59	21.13	59.40
2438086.5	6.05	0.6	12.87	221.08	14.33	16.30	21.23	59.84
2438087.5	6.09	0.6	12.78	220.84	14.28	17.00	21.33	60.27
2438088.5	6.13	0.6	12.69	220.61	14.24	17.69	21.43	60.71
2438089.5	6.17	-0.6	12.60	220.40	+14.20	+18.36	+21.52	61.15
2438090.5	6.22	0.5	12.51	220.19	14.17	19.02	21.62	61.59
2438091.5	6.26	0.5	12.42	220.00	14.14	19.67	21.71	62.03
2438092.5	6.31	0.5	12.33	219.83	14.12	20.31	21.80	62.46
2438093.5	6.36	0.5	12.24	219.66	14.10	20.93	21.89	62.90
2438094.5	6.41	-0.4	12.14	219.51	+14.08	+21.55	+21.98	63.34

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	″	°	°	°	°	h m	h m
2438034.5	0.961	22.91	0.49	285.24	6.89	8.15	8.29	.. .. .	.. .. .
2438035.5	0.963	22.32	0.47	284.98	6.81	359.19	359.33	0 03.3	0 02.8
2438036.5	0.964	21.73	0.44	284.70	6.72	350.24	350.38	0 40.1	0 39.5
2438037.5	0.966	21.12	0.42	284.40	6.63	341.30	341.44	1 16.7	1 16.1
2438038.5	0.968	20.50	0.40	284.08	6.52	332.37	332.52	1 53.3	1 52.7
2438039.5	0.970	19.86	0.38	283.73	6.41	323.46	323.60	2 29.8	2 29.3
2438040.5	0.972	19.22	0.36	283.36	6.29	314.57	314.71	3 06.3	3 05.8
2438041.5	0.974	18.56	0.34	282.96	6.16	305.68	305.82	3 42.8	3 42.2
2438042.5	0.976	17.89	0.31	282.53	6.02	296.81	296.95	4 19.1	4 18.6
2438043.5	0.978	17.21	0.29	282.06	5.87	287.95	288.09	4 55.5	4 54.9
2438044.5	0.979	16.52	0.27	281.55	5.72	279.11	279.25	5 31.7	5 31.1
2438045.5	0.981	15.81	0.25	281.00	5.55	270.27	270.41	6 07.9	6 07.4
2438046.5	0.983	15.10	0.23	280.39	5.38	261.45	261.59	6 44.1	6 43.5
2438047.5	0.984	14.38	0.21	279.73	5.21	252.64	252.78	7 20.2	7 19.6
2438048.5	0.986	13.64	0.19	278.99	5.02	243.84	243.98	7 56.3	7 55.7
2438049.5	0.987	12.90	0.17	278.17	4.83	235.04	235.19	8 32.3	8 31.7
2438050.5	0.989	12.16	0.15	277.26	4.63	226.26	226.40	9 08.3	9 07.7
2438051.5	0.990	11.40	0.13	276.23	4.42	217.49	217.63	9 44.2	9 43.7
2438052.5	0.991	10.64	0.12	275.07	4.21	208.73	208.87	10 20.2	10 19.6
2438053.5	0.993	9.87	0.10	273.73	3.99	199.98	200.12	10 56.0	10 55.5
2438054.5	0.994	9.11	0.09	272.17	3.77	191.23	191.37	11 31.9	11 31.3
2438055.5	0.995	8.34	0.07	270.35	3.54	182.49	182.63	12 07.7	12 07.1
2438056.5	0.996	7.57	0.06	268.17	3.31	173.76	173.90	12 43.5	12 42.9
2438057.5	0.996	6.81	0.05	265.52	3.07	165.03	165.17	13 19.2	13 18.7
2438058.5	0.997	6.07	0.04	262.23	2.83	156.31	156.45	13 55.0	13 54.4
2438059.5	0.998	5.34	0.03	258.06	2.58	147.59	147.73	14 30.7	14 30.1
2438060.5	0.998	4.64	0.02	252.65	2.33	138.88	139.02	15 06.4	15 05.9
2438061.5	0.999	3.99	0.02	245.43	2.08	130.16	130.30	15 42.2	15 41.6
2438062.5	0.999	3.43	0.01	235.68	1.83	121.45	121.59	16 17.9	16 17.3
2438063.5	0.999	2.99	0.01	222.65	1.58	112.74	112.88	16 53.6	16 53.0
2438064.5	0.999	2.74	0.01	206.35	1.32	104.03	104.17	17 29.3	17 28.7
2438065.5	0.999	2.75	0.01	188.57	1.07	95.32	95.46	18 05.0	18 04.4
2438066.5	0.999	2.99	0.01	172.32	0.81	86.61	86.75	18 40.7	18 40.1
2438067.5	0.999	3.43	0.01	159.35	0.56	77.90	78.04	19 16.4	19 15.8
2438068.5	0.999	3.99	0.02	149.65	0.31	69.18	69.32	19 52.2	19 51.6
2438069.5	0.998	4.63	0.02	142.46	0.06	60.46	60.60	20 27.9	20 27.3
2438070.5	0.998	5.33	0.03	137.06	359.81	51.73	51.88	21 03.7	21 03.1
2438071.5	0.997	6.05	0.04	132.89	359.56	43.01	43.15	21 39.5	21 38.9
2438072.5	0.996	6.79	0.05	129.61	359.31	34.27	34.41	22 15.3	22 14.8
2438073.5	0.996	7.54	0.06	126.95	359.07	25.53	25.67	22 51.2	22 50.6
2438074.5	0.995	8.29	0.07	124.75	358.84	16.78	16.92	23 27.1	23 26.5
2438075.5	0.994	9.05	0.08	122.91	358.60	8.03	8.17	.. .. .	.. .. .
2438076.5	0.993	9.80	0.10	121.34	358.38	359.27	359.41	0 03.0	0 02.4
2438077.5	0.992	10.55	0.11	119.98	358.15	350.50	350.64	0 39.0	0 38.4
2438078.5	0.990	11.30	0.13	118.79	357.93	341.72	341.86	1 15.0	1 14.4
2438079.5	0.989	12.04	0.15	117.74	357.72	332.93	333.07	1 51.0	1 50.4
2438080.5	0.988	12.77	0.16	116.80	357.52	324.13	324.27	2 27.1	2 26.5
2438081.5	0.986	13.50	0.18	115.96	357.32	315.32	315.46	3 03.2	3 02.6
2438082.5	0.985	14.21	0.20	115.19	357.12	306.50	306.64	3 39.4	3 38.8
2438083.5	0.983	14.92	0.22	114.50	356.94	297.67	297.81	4 15.6	4 15.0
2438084.5	0.982	15.62	0.24	113.87	356.76	288.83	288.97	4 51.9	4 51.3
2438085.5	0.980	16.30	0.26	113.28	356.59	279.97	280.11	5 28.2	5 27.6
2438086.5	0.978	16.98	0.28	112.75	356.42	271.11	271.25	6 04.6	6 04.0
2438087.5	0.976	17.64	0.30	112.25	356.27	262.23	262.37	6 41.0	6 40.4
2438088.5	0.975	18.29	0.32	111.79	356.12	253.34	253.48	7 17.5	7 16.9
2438089.5	0.973	18.93	0.34	111.36	355.98	244.43	244.57	7 54.0	7 53.4
2438090.5	0.971	19.55	0.36	110.96	355.85	235.52	235.66	8 30.6	8 30.0
2438091.5	0.969	20.17	0.38	110.59	355.72	226.59	226.73	9 07.2	9 06.7
2438092.5	0.968	20.77	0.40	110.25	355.61	217.65	217.79	9 43.9	9 43.4
2438093.5	0.966	21.35	0.42	109.92	355.50	208.69	208.83	10 20.7	10 20.1
2438094.5	0.964	21.93	0.44	109.62	355.40	199.72	199.86	10 57.5	10 56.9

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		″	°	°	°	°	°
2438798.5	6.51	−0.4	11.95	273.09	+22.40	−24.10	+23.30	70.78
2438799.5	6.45	0.4	12.05	272.96	22.38	23.50	23.36	71.21
2438800.5	6.40	0.4	12.15	272.81	22.37	22.88	23.43	71.65
2438801.5	6.35	0.5	12.24	272.65	22.35	22.25	23.49	72.08
2438802.5	6.30	0.5	12.34	272.47	22.34	21.60	23.55	72.52
2438803.5	6.26	−0.5	12.43	272.28	+22.32	−20.94	+23.61	72.96
2438804.5	6.21	0.5	12.53	272.08	22.31	20.26	23.66	73.39
2438805.5	6.16	0.6	12.62	271.86	22.30	19.57	23.72	73.83
2438806.5	6.12	0.6	12.71	271.63	22.29	18.86	23.78	74.27
2438807.5	6.08	0.6	12.80	271.38	22.28	18.15	23.83	74.70
2438808.5	6.04	−0.7	12.89	271.13	+22.27	−17.41	+23.88	75.14
2438809.5	6.00	0.7	12.97	270.86	22.26	16.67	23.93	75.58
2438810.5	5.96	0.7	13.05	270.57	22.26	15.91	23.98	76.01
2438811.5	5.92	0.7	13.13	270.28	22.25	15.14	24.03	76.45
2438812.5	5.89	0.7	13.21	269.97	22.24	14.36	24.08	76.89
2438813.5	5.85	−0.8	13.29	269.65	+22.24	−13.56	+24.12	77.33
2438814.5	5.82	0.8	13.36	269.32	22.24	12.75	24.16	77.76
2438815.5	5.79	0.8	13.43	268.98	22.23	11.94	24.21	78.20
2438816.5	5.76	0.8	13.49	268.63	22.23	11.11	24.25	78.64
2438817.5	5.74	0.9	13.56	268.27	22.23	10.27	24.28	79.07
2438818.5	5.71	−0.9	13.61	267.90	+22.23	− 9.42	+24.32	79.51
2438819.5	5.69	0.9	13.67	267.52	22.22	8.56	24.36	79.95
2438820.5	5.67	0.9	13.72	267.13	22.22	7.70	24.39	80.39
2438821.5	5.65	0.9	13.77	266.74	22.22	6.82	24.42	80.83
2438822.5	5.63	1.0	13.81	266.33	22.22	5.94	24.46	81.26
2438823.5	5.61	−1.0	13.85	265.93	+22.22	− 5.05	+24.49	81.70
2438824.5	5.60	1.0	13.89	265.52	22.22	4.16	24.51	82.14
2438825.5	5.59	1.0	13.92	265.10	22.23	3.26	24.54	82.58
2438826.5	5.58	1.0	13.94	264.68	22.23	2.36	24.57	83.02
2438827.5	5.57	1.0	13.96	264.26	22.23	1.46	24.59	83.45
2438828.5	5.56	−1.0	13.98	263.83	+22.23	− 0.55	+24.61	83.89
2438829.5	5.56	1.0	13.99	263.41	22.23	+ 0.36	24.63	84.33
2438830.5	5.56	1.0	14.00	262.98	22.24	1.26	24.65	84.77
2438831.5	5.56	1.0	14.00	262.56	22.24	2.17	24.67	85.21
2438832.5	5.56	1.0	14.00	262.13	22.24	3.08	24.69	85.65
2438833.5	5.56	−1.0	13.99	261.71	+22.25	+ 3.98	+24.70	86.09
2438834.5	5.56	1.0	13.98	261.29	22.25	4.89	24.71	86.53
2438835.5	5.57	1.0	13.97	260.88	22.26	5.79	24.73	86.97
2438836.5	5.58	1.0	13.95	260.47	22.26	6.68	24.74	87.41
2438837.5	5.59	1.0	13.92	260.06	22.27	7.57	24.74	87.85
2438838.5	5.60	−0.9	13.89	259.66	+22.27	+ 8.46	+24.75	88.29
2438839.5	5.61	0.9	13.86	259.27	22.28	9.33	24.76	88.73
2438840.5	5.63	0.9	13.82	258.88	22.29	10.21	24.76	89.17
2438841.5	5.64	0.9	13.78	258.50	22.29	11.07	24.76	89.61
2438842.5	5.66	0.9	13.74	258.13	22.30	11.93	24.76	90.05
2438843.5	5.68	−0.9	13.69	257.77	+22.31	+12.77	+24.76	90.50
2438844.5	5.70	0.8	13.64	257.42	22.32	13.61	24.76	90.94
2438845.5	5.73	0.8	13.58	257.08	22.33	14.44	24.76	91.38
2438846.5	5.75	0.8	13.52	256.75	22.35	15.26	24.75	91.82
2438847.5	5.78	0.8	13.46	256.43	22.36	16.07	24.74	92.26
2438848.5	5.81	−0.8	13.39	256.12	+22.37	+16.86	+24.73	92.71
2438849.5	5.84	0.7	13.33	255.82	22.39	17.65	24.72	93.15
2438850.5	5.87	0.7	13.26	255.53	22.40	18.42	24.71	93.59
2438851.5	5.90	0.7	13.18	255.26	22.42	19.18	24.70	94.04
2438852.5	5.93	0.7	13.11	255.00	22.44	19.93	24.68	94.48
2438853.5	5.97	−0.6	13.03	254.76	+22.46	+20.67	+24.67	94.93
2438854.5	6.00	0.6	12.95	254.52	22.48	21.39	24.65	95.37
2438855.5	6.04	0.6	12.87	254.30	22.50	22.10	24.63	95.82
2438856.5	6.08	0.6	12.79	254.10	22.52	22.79	24.61	96.26
2438857.5	6.12	0.6	12.70	253.91	22.55	23.47	24.58	96.71
2438858.5	6.16	−0.5	12.62	253.73	+22.58	+24.14	+24.56	97.15

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2438798.5	0.963	22.20	0.44	288.92	25.94	214.06	214.20	9 58.7	9 58.1
2438799.5	0.965	21.65	0.42	288.70	25.88	205.09	205.24	10 35.4	10 34.8
2438800.5	0.967	21.08	0.41	288.47	25.81	196.15	196.29	11 12.1	11 11.5
2438801.5	0.968	20.50	0.39	288.23	25.74	187.21	187.36	11 48.7	11 48.1
2438802.5	0.970	19.91	0.37	287.97	25.66	178.30	178.44	12 25.3	12 24.7
2438803.5	0.972	19.30	0.35	287.69	25.58	169.39	169.53	13 01.8	13 01.2
2438804.5	0.974	18.68	0.33	287.38	25.48	160.50	160.64	13 38.2	13 37.6
2438805.5	0.975	18.05	0.31	287.06	25.39	151.62	151.76	14 14.6	14 14.0
2438806.5	0.977	17.41	0.29	286.71	25.28	142.75	142.90	14 50.9	14 50.3
2438807.5	0.979	16.76	0.27	286.33	25.17	133.90	134.04	15 27.2	15 26.6
2438808.5	0.980	16.09	0.25	285.92	25.05	125.06	125.20	16 03.4	16 02.8
2438809.5	0.982	15.41	0.23	285.47	24.93	116.23	116.38	16 39.6	16 39.0
2438810.5	0.984	14.73	0.21	284.98	24.80	107.41	107.56	17 15.7	17 15.1
2438811.5	0.985	14.03	0.20	284.43	24.66	98.61	98.75	17 51.7	17 51.1
2438812.5	0.987	13.32	0.18	283.83	24.52	89.82	89.96	18 27.7	18 27.2
2438813.5	0.988	12.60	0.16	283.16	24.37	81.04	81.18	19 03.7	19 03.1
2438814.5	0.989	11.88	0.14	282.40	24.22	72.27	72.41	19 39.6	19 39.0
2438815.5	0.991	11.14	0.13	281.54	24.06	63.51	63.65	20 15.5	20 14.9
2438816.5	0.992	10.40	0.11	280.56	23.89	54.76	54.90	20 51.3	20 50.8
2438817.5	0.993	9.65	0.10	279.42	23.72	46.02	46.16	21 27.1	21 26.6
2438818.5	0.994	8.90	0.08	278.09	23.55	37.29	37.43	22 02.9	22 02.3
2438819.5	0.995	8.15	0.07	276.52	23.37	28.56	28.71	22 38.6	22 38.1
2438820.5	0.996	7.39	0.06	274.62	23.18	19.85	19.99	23 14.3	23 13.8
2438821.5	0.997	6.64	0.05	272.30	22.99	11.14	11.28	23 50.0	23 49.4
2438822.5	0.997	5.89	0.04	269.38	22.79	2.44	2.58	.. ..	.. ..
2438823.5	0.998	5.16	0.03	265.62	22.60	353.74	353.88	0 25.7	0 25.1
2438824.5	0.998	4.45	0.02	260.65	22.39	345.05	345.19	1 01.3	1 00.7
2438825.5	0.999	3.79	0.02	253.86	22.19	336.36	336.50	1 36.9	1 36.3
2438826.5	0.999	3.19	0.01	244.36	21.98	327.67	327.82	2 12.5	2 11.9
2438827.5	0.999	2.71	0.01	231.05	21.77	318.99	319.13	2 48.1	2 47.5
2438828.5	1.000	2.43	0.01	213.48	21.56	310.31	310.45	3 23.7	3 23.1
2438829.5	1.000	2.42	0.01	193.69	21.35	301.62	301.77	3 59.3	3 58.7
2438830.5	0.999	2.68	0.01	175.75	21.13	292.94	293.09	4 34.9	4 34.3
2438831.5	0.999	3.14	0.01	162.00	20.92	284.26	284.41	5 10.4	5 09.9
2438832.5	0.999	3.73	0.01	152.17	20.70	275.58	275.72	5 46.0	5 45.5
2438833.5	0.999	4.40	0.02	145.15	20.48	266.89	267.03	6 21.7	6 21.1
2438834.5	0.998	5.11	0.03	140.02	20.27	258.20	258.34	6 57.3	6 56.7
2438835.5	0.997	5.85	0.04	136.15	20.06	249.50	249.65	7 32.9	7 32.3
2438836.5	0.997	6.61	0.05	133.14	19.84	240.80	240.95	8 08.6	8 08.0
2438837.5	0.996	7.37	0.06	130.75	19.63	232.10	232.24	8 44.3	8 43.7
2438838.5	0.995	8.14	0.07	128.80	19.42	223.39	223.53	9 20.0	9 19.4
2438839.5	0.994	8.91	0.08	127.18	19.22	214.67	214.82	9 55.8	9 55.2
2438840.5	0.993	9.68	0.10	125.82	19.01	205.94	206.09	10 31.5	10 30.9
2438841.5	0.992	10.44	0.11	124.65	18.81	197.21	197.36	11 07.4	11 06.8
2438842.5	0.990	11.20	0.13	123.63	18.61	188.47	188.61	11 43.2	11 42.6
2438843.5	0.989	11.96	0.15	122.74	18.42	179.72	179.86	12 19.1	12 18.5
2438844.5	0.988	12.71	0.17	121.96	18.23	170.96	171.10	12 55.1	12 54.5
2438845.5	0.986	13.45	0.19	121.26	18.05	162.18	162.33	13 31.0	13 30.5
2438846.5	0.985	14.19	0.21	120.63	17.87	153.40	153.55	14 07.1	14 06.5
2438847.5	0.983	14.91	0.23	120.06	17.70	144.61	144.75	14 43.2	14 42.6
2438848.5	0.982	15.63	0.25	119.54	17.53	135.80	135.95	15 19.3	15 18.7
2438849.5	0.980	16.33	0.27	119.07	17.37	126.98	127.13	15 55.5	15 54.9
2438850.5	0.978	17.03	0.29	118.63	17.21	118.15	118.30	16 31.7	16 31.2
2438851.5	0.976	17.71	0.31	118.24	17.06	109.31	109.45	17 08.1	17 07.5
2438852.5	0.974	18.39	0.33	117.87	16.92	100.45	100.60	17 44.4	17 43.8
2438853.5	0.973	19.05	0.36	117.53	16.78	91.58	91.73	18 20.8	18 20.2
2438854.5	0.971	19.70	0.38	117.21	16.66	82.70	82.84	18 57.3	18 56.7
2438855.5	0.969	20.34	0.40	116.92	16.53	73.80	73.95	19 33.9	19 33.3
2438856.5	0.967	20.97	0.42	116.64	16.42	64.89	65.03	20 10.5	20 09.9
2438857.5	0.965	21.58	0.45	116.38	16.31	55.96	56.11	20 47.1	20 46.5
2438858.5	0.963	22.18	0.47	116.14	16.21	47.02	47.17	21 23.9	21 23.3

Julian Day	Light-time	Stellar Magnitude	Diameter	A_E+180°	D_E	A_S-A_E	D_S	L_S
	m		"	°	°	°	°	°
2439565.5	6.09	-0.6	12.76	310.30	+17.26	-22.61	+23.72	106.15
2439566.5	6.04	0.6	12.88	310.20	17.29	22.02	23.67	106.60
2439567.5	5.98	0.6	13.00	310.09	17.33	21.42	23.61	107.06
2439568.5	5.93	0.7	13.11	309.97	17.37	20.81	23.54	107.51
2439569.5	5.88	0.7	13.23	309.83	17.42	20.18	23.48	107.96
2439570.5	5.83	-0.7	13.34	309.68	+17.47	-19.54	+23.42	108.42
2439571.5	5.78	0.8	13.46	309.53	17.52	18.89	23.35	108.88
2439572.5	5.73	0.8	13.57	309.35	17.58	18.23	23.28	109.33
2439573.5	5.68	0.8	13.68	309.17	17.65	17.55	23.21	109.79
2439574.5	5.64	0.8	13.79	308.97	17.72	16.87	23.14	110.24
2439575.5	5.59	-0.9	13.90	308.76	+17.79	-16.17	+23.07	110.70
2439576.5	5.55	0.9	14.01	308.54	17.86	15.45	22.99	111.16
2439577.5	5.51	0.9	14.11	308.31	17.95	14.73	22.92	111.62
2439578.5	5.47	0.9	14.22	308.06	18.03	13.99	22.84	112.08
2439579.5	5.43	1.0	14.32	307.81	18.12	13.25	22.76	112.54
2439580.5	5.39	-1.0	14.42	307.54	+18.21	-12.49	+22.68	113.00
2439581.5	5.36	1.0	14.51	307.26	18.31	11.72	22.60	113.46
2439582.5	5.33	1.1	14.60	306.97	18.41	10.94	22.51	113.92
2439583.5	5.29	1.1	14.69	306.67	18.51	10.15	22.43	114.38
2439584.5	5.26	1.1	14.78	306.37	18.62	9.35	22.34	114.84
2439585.5	5.23	-1.1	14.86	306.05	+18.73	- 8.54	+22.25	115.30
2439586.5	5.21	1.2	14.94	305.72	18.84	7.73	22.16	115.77
2439587.5	5.18	1.2	15.01	305.38	18.95	6.90	22.07	116.23
2439588.5	5.16	1.2	15.09	305.04	19.07	6.07	21.98	116.69
2439589.5	5.13	1.2	15.15	304.69	19.19	5.23	21.88	117.16
2439590.5	5.11	-1.2	15.21	304.33	+19.31	- 4.38	+21.79	117.62
2439591.5	5.09	1.3	15.27	303.97	19.43	3.53	21.69	118.09
2439592.5	5.08	1.3	15.32	303.60	19.56	2.67	21.59	118.55
2439593.5	5.06	1.3	15.37	303.23	19.68	1.81	21.49	119.02
2439594.5	5.05	1.3	15.41	302.85	19.81	0.94	21.38	119.49
2439595.5	5.03	-1.3	15.45	302.47	+19.94	- 0.07	+21.28	119.96
2439596.5	5.02	1.3	15.48	302.09	20.07	+ 0.80	21.17	120.42
2439597.5	5.01	1.3	15.51	301.71	20.19	1.67	21.07	120.89
2439598.5	5.01	1.3	15.53	301.33	20.32	2.54	20.96	121.36
2439599.5	5.00	1.3	15.55	300.94	20.45	3.42	20.85	121.83
2439600.5	5.00	-1.3	15.56	300.56	+20.58	+ 4.29	+20.73	122.30
2439601.5	5.00	1.3	15.57	300.18	20.71	5.16	20.62	122.77
2439602.5	5.00	1.3	15.57	299.80	20.83	6.03	20.51	123.25
2439603.5	5.00	1.3	15.56	299.42	20.96	6.89	20.39	123.72
2439604.5	5.00	1.3	15.56	299.05	21.08	7.75	20.27	124.19
2439605.5	5.00	-1.3	15.54	298.68	+21.21	+ 8.61	+20.15	124.67
2439606.5	5.01	1.2	15.52	298.32	21.33	9.46	20.03	125.14
2439607.5	5.02	1.2	15.50	297.96	21.45	10.31	19.91	125.61
2439608.5	5.03	1.2	15.47	297.61	21.57	11.14	19.78	126.09
2439609.5	5.04	1.2	15.44	297.27	21.68	11.98	19.66	126.57
2439610.5	5.05	-1.2	15.40	296.93	+21.80	+12.80	+19.53	127.04
2439611.5	5.06	1.2	15.36	296.61	21.91	13.61	19.40	127.52
2439612.5	5.08	1.2	15.31	296.29	22.02	14.42	19.27	128.00
2439613.5	5.10	1.1	15.26	295.98	22.12	15.22	19.14	128.48
2439614.5	5.11	1.1	15.21	295.68	22.23	16.00	19.01	128.96
2439615.5	5.14	-1.1	15.15	295.39	+22.33	+16.78	+18.87	129.44
2439616.5	5.16	1.1	15.09	295.11	22.43	17.54	18.74	129.92
2439617.5	5.18	1.1	15.02	294.85	22.53	18.30	18.60	130.40
2439618.5	5.20	1.0	14.95	294.59	22.62	19.04	18.46	130.88
2439619.5	5.23	1.0	14.88	294.35	22.71	19.77	18.32	131.37
2439620.5	5.25	-1.0	14.81	294.13	+22.80	+20.48	+18.18	131.85
2439621.5	5.28	1.0	14.73	293.91	22.88	21.18	18.04	132.33
2439622.5	5.31	1.0	14.65	293.71	22.96	21.87	17.89	132.82
2439623.5	5.34	0.9	14.57	293.52	23.04	22.55	17.75	133.30
2439624.5	5.37	0.9	14.49	293.34	23.12	23.21	17.60	133.79
2439625.5	5.40	-0.9	14.40	293.18	+23.19	+23.86	+17.45	134.28

Julian Day	k	i	Defect of Illumination	Position Angle of Defect	Position Angle of Axis	Central Meridian E.T.	Central Meridian U.T.	Time of Transit of Zero Meridian E.T.	Time of Transit of Zero Meridian U.T.
		°	"	°	°	°	°	h m	h m
2439565.5	0.963	22.11	0.47	286.58	37.34	31.09	31.23	22 29.4	22 28.8
2439566.5	0.965	21.56	0.45	286.47	37.33	22.09	22.24	23 06.2	23 05.6
2439567.5	0.967	21.00	0.43	286.36	37.32	13.11	13.25	23 43.0	23 42.4
2439568.5	0.969	20.43	0.41	286.24	37.30	4.13	4.28	.. .. .	.. .. .
2439569.5	0.970	19.84	0.39	286.12	37.28	355.17	355.32	0 19.8	0 19.2
2439570.5	0.972	19.23	0.37	285.99	37.26	346.22	346.37	0 56.5	0 55.9
2439571.5	0.974	18.62	0.35	285.86	37.24	337.29	337.43	1 33.2	1 32.6
2439572.5	0.976	17.99	0.33	285.71	37.22	328.37	328.51	2 09.8	2 09.2
2439573.5	0.977	17.35	0.31	285.56	37.19	319.45	319.60	2 46.3	2 45.7
2439574.5	0.979	16.70	0.29	285.39	37.17	310.55	310.70	3 22.8	3 22.2
2439575.5	0.981	16.03	0.27	285.21	37.14	301.67	301.81	3 59.2	3 58.6
2439576.5	0.982	15.35	0.25	285.00	37.11	292.79	292.93	4 35.6	4 35.0
2439577.5	0.984	14.66	0.23	284.78	37.07	283.92	284.07	5 12.0	5 11.4
2439578.5	0.985	13.96	0.21	284.54	37.04	275.07	275.21	5 48.3	5 47.7
2439579.5	0.987	13.25	0.19	284.26	37.00	266.23	266.37	6 24.5	6 23.9
2439580.5	0.988	12.52	0.17	283.95	36.96	257.39	257.54	7 00.7	7 00.1
2439581.5	0.989	11.79	0.15	283.59	36.91	248.57	248.72	7 36.9	7 36.3
2439582.5	0.991	11.04	0.14	283.18	36.87	239.76	239.91	8 13.0	8 12.4
2439583.5	0.992	10.28	0.12	282.70	36.82	230.96	231.11	8 49.1	8 48.5
2439584.5	0.993	9.52	0.10	282.14	36.77	222.17	222.32	9 25.1	9 24.5
2439585.5	0.994	8.74	0.09	281.47	36.71	213.39	213.53	10 01.1	10 00.5
2439586.5	0.995	7.96	0.07	280.66	36.66	204.61	204.76	10 37.1	10 36.5
2439587.5	0.996	7.18	0.06	279.66	36.60	195.85	195.99	11 13.0	11 12.4
2439588.5	0.997	6.38	0.05	278.39	36.53	187.09	187.23	11 48.9	11 48.3
2439589.5	0.998	5.59	0.04	276.75	36.47	178.34	178.48	12 24.8	12 24.2
2439590.5	0.998	4.79	0.03	274.53	36.40	169.59	169.73	13 00.6	13 00.0
2439591.5	0.999	4.00	0.02	271.40	36.33	160.85	160.99	13 36.4	13 35.8
2439592.5	0.999	3.22	0.01	266.71	36.26	152.11	152.26	14 12.2	14 11.6
2439593.5	1.000	2.47	0.01	259.05	36.18	143.38	143.53	14 48.0	14 47.4
2439594.5	1.000	1.80	0.00	245.20	36.11	134.65	134.80	15 23.8	15 23.2
2439595.5	1.000	1.34	0.00	218.94	36.03	125.93	126.07	15 59.5	15 58.9
2439596.5	1.000	1.34	0.00	182.13	35.95	117.20	117.35	16 35.3	16 34.7
2439597.5	1.000	1.79	0.00	155.33	35.86	108.48	108.63	17 11.1	17 10.5
2439598.5	1.000	2.46	0.01	141.17	35.78	99.76	99.90	17 46.8	17 46.2
2439599.5	0.999	3.22	0.01	133.37	35.69	91.04	91.18	18 22.6	18 22.0
2439600.5	0.999	4.02	0.02	128.60	35.61	82.31	82.46	18 58.3	18 57.8
2439601.5	0.998	4.83	0.03	125.43	35.52	73.59	73.73	19 34.1	19 33.5
2439602.5	0.998	5.65	0.04	123.19	35.43	64.86	65.00	20 09.9	20 09.3
2439603.5	0.997	6.47	0.05	121.53	35.34	56.12	56.27	20 45.7	20 45.1
2439604.5	0.996	7.30	0.06	120.25	35.25	47.39	47.53	21 21.6	21 21.0
2439605.5	0.995	8.12	0.08	119.24	35.16	38.65	38.79	21 57.4	21 56.8
2439606.5	0.994	8.94	0.09	118.43	35.07	29.90	30.04	22 33.3	22 32.7
2439607.5	0.993	9.76	0.11	117.76	34.98	21.15	21.29	23 09.2	23 08.6
2439608.5	0.992	10.57	0.13	117.20	34.88	12.39	12.53	23 45.2	23 44.6
2439609.5	0.990	11.38	0.15	116.72	34.79	3.62	3.77	.. .. .	.. .. .
2439610.5	0.989	12.18	0.17	116.32	34.71	354.84	354.99	0 21.1	0 20.5
2439611.5	0.987	12.98	0.20	115.97	34.62	346.06	346.21	0 57.2	0 56.6
2439612.5	0.986	13.76	0.22	115.66	34.53	337.27	337.41	1 33.2	1 32.6
2439613.5	0.984	14.54	0.24	115.39	34.45	328.46	328.61	2 09.3	2 08.7
2439614.5	0.982	15.31	0.27	115.15	34.37	319.65	319.80	2 45.5	2 44.9
2439615.5	0.980	16.07	0.30	114.94	34.28	310.83	310.97	3 21.6	3 21.1
2439616.5	0.979	16.82	0.32	114.75	34.21	301.99	302.13	3 57.9	3 57.3
2439617.5	0.977	17.56	0.35	114.58	34.13	293.14	293.29	4 34.2	4 33.6
2439618.5	0.975	18.29	0.38	114.43	34.06	284.28	284.43	5 10.5	5 09.9
2439619.5	0.973	19.01	0.41	114.29	33.99	275.41	275.55	5 46.9	5 46.3
2439620.5	0.971	19.71	0.43	114.16	33.92	266.52	266.67	6 23.4	6 22.8
2439621.5	0.969	20.41	0.46	114.04	33.86	257.62	257.77	6 59.9	6 59.3
2439622.5	0.967	21.09	0.49	113.94	33.80	248.71	248.86	7 36.5	7 35.9
2439623.5	0.964	21.76	0.52	113.84	33.75	239.78	239.93	8 13.1	8 12.5
2439624.5	0.962	22.42	0.55	113.75	33.69	230.84	230.99	8 49.8	8 49.2
2439625.5	0.960	23.06	0.58	113.67	33.65	221.89	222.03	9 26.6	9 26.0